Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting-X	Northing-Y
1	00+000	781253.094	1444318.567
2	00+010	781250.931	1444308.804
3	00+020	781248.768	1444299.040
4	00+030	781246.605	1444289.277
5	00+040	781244.442	1444279.514
6	00+050	781242.279	1444269.751
7	00+060	781240.116	1444259.987
8	00+070	781237.953	1444250.224
9	00+080	781235.790	1444240.461
10	00+090	781233.627	1444230.697
11	00+100	781231.465	1444220.934
12	00+110	781229.302	1444211.171
13	00+120	781227.139	1444201.408
14	00+130	781224.976	1444191.644
15	00+140	781222.791	1444181.886
16	00+150	781220.493	1444172.154
17	00+160	781218.074	1444162.451
18	00+170	781215.534	1444152.779
19	00+180	781212.873	1444143.139
20	00+190	781210.092	1444133.534
21	00+200	781207.192	1444123.964
22	00+210	781204.171	1444114.431
23	00+220	781201.056	1444104.928
24	00+230	781197.933	1444095.429
25	00+240	781194.812	1444085.928
26	00+250	781191.770	1444076.402
27	00+260	781188.847	1444066.839
28	00+270	781186.028	1444057.245
29	00+280	781183.225	1444047.646
30	00+290	781180.421	1444038.047
31	00+300	781177.617	1444028.448
32	00+310	781174.814	1444018.849
33	00+320	781172.010	1444009.250
34	00+330	781169.171	1443999.661
35	00+340	781166.186	1443990.118
36	00+350	781162.972	1443980.648
37	00+360	781159.524	1443971.262
38	00+370	781155.841	1443961.965
39	00+380	781151.928	1443952.763
40	00+390	781147.818	1443943.647
41	00+400	781143.616	1443934.572
42	00+410	781139.405	1443925.502
43	00+420	781135.195	1443916.432
44	00+430	781130.984	1443907.361
45	00+440	781126.773	1443898.291

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting-X	Northing-Y
46	00+450	781122.562	1443889.221
47	00+460	781118.351	1443880.151
48	00+470	781114.140	1443871.081
49	00+480	781109.929	1443862.011
50	00+490	781105.718	1443852.940
51	00+500	781101.509	1443843.869
52	00+510	781097.361	1443834.770
53	00+520	781093.406	1443825.586
54	00+530	781089.784	1443816.266
55	00+540	781086.640	1443806.774
56	00+550	781084.124	1443797.098
57	00+560	781082.393	1443787.253
58	00+570	781081.606	1443777.288
59	00+580	781081.898	1443767.297
60	00+590	781083.296	1443757.401
61	00+600	781085.783	1443747.720
62	00+610	781089.328	1443738.375
63	00+620	781093.887	1443729.481
64	00+630	781099.405	1443721.147
65	00+640	781105.800	1443713.465
66	00+650	781112.917	1443706.446
67	00+660	781120.595	1443700.042
68	00+670	781128.694	1443694.179
69	00+680	781137.096	1443688.758
70	00+690	781145.703	1443683.668
71	00+700	781154.430	1443678.785
72	00+710	781163.203	1443673.985
73	00+720	781171.978	1443669.190
74	00+730	781180.746	1443664.382
75	00+740	781189.463	1443659.481
76	00+750	781198.069	1443654.389
77	00+760	781206.500	1443649.013
78	00+770	781214.712	1443643.307
79	00+780	781222.689	1443637.278
80	00+790	781230.433	1443630.952
81	00+800	781237.999	1443624.413
82	00+810	781245.457	1443617.752
83	00+820	781252.880	1443611.051
84	00+830	781260.301	1443604.348
85	00+840	781267.724	1443597.648
86	00+850	781275.193	1443590.998
87	00+860	781282.801	1443584.509
88	00+870	781290.638	1443578.298
89	00+880	781298.780	1443572.495
90	00+890	781307.274	1443567.221

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting-X	Northing-Y
91	00+900	781316.100	1443562.525
92	00+910	781325.220	1443558.427
93	00+920	781334.593	1443554.946
94	00+930	781344.176	1443552.097
95	00+940	781353.927	1443549.888
96	00+950	781363.791	1443548.250
97	00+960	781373.718	1443547.044
98	00+970	781383.675	1443546.124
99	00+980	781393.645	1443545.343
100	00+990	781403.616	1443544.583
101	01+000	781413.587	1443543.823
102	01+010	781423.558	1443543.062
103	01+020	781433.529	1443542.302
104	01+030	781443.500	1443541.542
105	01+040	781453.471	1443540.781
106	01+050	781463.442	1443540.021
107	01+060	781473.413	1443539.261
108	01+070	781483.384	1443538.501
109	01+080	781493.355	1443537.740
110	01+090	781503.326	1443536.980
111	01+100	781513.297	1443536.220
112	01+110	781523.268	1443535.459
113	01+120	781533.239	1443534.699
114	01+130	781543.208	1443533.913
115	01+140	781553.166	1443532.992
116	01+050	781463.457	1443540.020
117	01+060	781473.428	1443539.260
118	01+070	781483.399	1443538.499
119	01+080	781493.370	1443537.739
120	01+090	781503.342	1443536.979
121	01+100	781513.313	1443536.219
122	01+110	781523.284	1443535.458
123	01+120	781533.255	1443534.698
124	01+130	781543.226	1443533.938
125	01+140	781553.197	1443533.177
126	01+150	781563.167	1443532.412
127	01+160	781573.131	1443531.558
128	01+170	781583.072	1443530.474
129	01+180	781592.965	1443529.021
130	01+190	781602.776	1443527.091
131	01+200	781612.478	1443524.674
132	01+210	781622.047	1443521.774
133	01+220	781631.460	1443518.400
134	01+230	781640.692	1443514.560
135	01+240	781649.720	1443510.263

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting-X	Northing-Y
136	01+250	781658.523	1443505.520
137	01+260	781667.078	1443500.344
138	01+270	781675.363	1443494.746
139	01+280	781683.358	1443488.741
140	01+290	781691.043	1443482.344
141	01+300	781698.398	1443475.571
142	01+310	781705.406	1443468.438
143	01+320	781712.049	1443460.965
144	01+330	781718.309	1443453.169
145	01+340	781724.173	1443445.069
146	01+350	781729.624	1443436.687
147	01+360	781734.649	1443428.043
148	01+370	781739.237	1443419.158
149	01+380	781743.374	1443410.055
150	01+390	781747.056	1443400.759
151	01+400	781750.349	1443391.317
152	01+410	781753.384	1443381.789
153	01+420	781756.295	1443372.222
154	01+430	781759.188	1443362.650
155	01+432	781759.767	1443360.735

Centerline Coordinates of Tube-I (LHS)

SL No.	Chainage (m)	Easting-X	Northing-Y
1	01+442	781769.045	1443353.252
2	01+452	781771.938	1443343.680
3	01+462	781774.832	1443334.108
4	01+472	781777.726	1443324.536
5	01+482	781780.620	1443314.963
6	01+492	781783.513	1443305.391
7	01+502	781786.407	1443295.819
8	01+512	781789.301	1443286.247
9	01+522	781792.194	1443276.675
10	01+532	781795.088	1443267.103
11	01+542	781797.982	1443257.530
12	01+552	781800.876	1443247.958
13	01+562	781803.769	1443238.386
14	01+572	781806.661	1443228.814
15	01+582	781809.524	1443219.232
16	01+592	781812.304	1443209.626
17	01+602	781814.949	1443199.982
18	01+612	781817.434	1443190.296
19	01+622	781819.757	1443180.570
20	01+632	781821.918	1443170.806
21	01+642	781823.916	1443161.008
22	01+652	781825.750	1443151.178
23	01+662	781827.420	1443141.318
24	01+672	781828.925	1443131.432
25	01+682	781830.266	1443121.523
26	01+692	781831.441	1443111.592

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
27	01+702	781832.451	1443101.643
28	01+712	781833.294	1443091.679
29	01+722	781833.972	1443081.702
30	01+732	781834.483	1443071.715
31	01+742	781834.827	1443061.722
32	01+752	781835.005	1443051.723
33	01+762	781835.017	1443041.723
34	01+772	781834.861	1443031.725
35	01+782	781834.539	1443021.730
36	01+792	781834.051	1443011.742
37	01+802	781833.396	1443001.764
38	01+812	781832.575	1442991.798
39	01+822	781831.588	1442981.846
40	01+832	781830.435	1442971.913
41	01+842	781829.117	1442962.001
42	01+852	781827.634	1442952.111
43	01+862	781825.986	1442942.248
44	01+872	781824.174	1442932.414
45	01+882	781822.198	1442922.611
46	01+892	781820.059	1442912.843
47	01+902	781817.758	1442903.111
48	01+912	781815.295	1442893.419
49	01+922	781812.671	1442883.770
50	01+932	781809.886	1442874.165
51	01+942	781806.942	1442864.609
52	01+952	781803.839	1442855.103
53	01+962	781800.577	1442845.650
54	01+972	781797.159	1442836.252
55	01+982	781793.585	1442826.913
56	01+992	781789.855	1442817.635
57	02+002	781785.971	1442808.420
58	02+012	781781.934	1442799.271
59	02+022	781777.746	1442790.190
60	02+032	781773.406	1442781.181
61	02+042	781768.917	1442772.245
62	02+052	781764.280	1442763.386
63	02+062	781759.496	1442754.605
64	02+072	781754.584	1442745.894
65	02+082	781749.592	1442737.230
66	02+092	781744.566	1442728.584
67	02+102	781739.538	1442719.940
68	02+112	781734.509	1442711.296
69	02+122	781729.481	1442702.652
70	02+132	781724.453	1442694.009
71	02+142	781719.425	1442685.365
72	02+152	781714.397	1442676.721
73	02+162	781709.368	1442668.077
74	02+172	781704.340	1442659.433
75	02+182	781699.312	1442650.789
76	02+192	781694.284	1442642.145
77	02+202	781689.255	1442633.501
78	02+212	781684.227	1442624.857
79	02+222	781679.199	1442616.213

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
80	02+232	781674.171	1442607.570
81	02+242	781669.143	1442598.926
82	02+252	781664.114	1442590.282
83	02+262	781659.086	1442581.638
84	02+272	781654.058	1442572.994
85	02+282	781649.030	1442564.350
86	02+292	781644.001	1442555.706
87	02+302	781638.973	1442547.062
88	02+312	781633.945	1442538.418
89	02+322	781628.917	1442529.774
90	02+332	781623.889	1442521.131
91	02+342	781618.860	1442512.487
92	02+352	781613.832	1442503.843
93	02+362	781608.804	1442495.199
94	02+372	781603.776	1442486.555
95	02+382	781598.748	1442477.911
96	02+392	781593.719	1442469.267
97	02+402	781588.691	1442460.623
98	02+412	781583.663	1442451.979
99	02+422	781578.635	1442443.335
100	02+432	781573.606	1442434.692
101	02+442	781568.578	1442426.048
102	02+452	781563.550	1442417.404
103	02+462	781558.522	1442408.760
104	02+472	781553.494	1442400.116
105	02+482	781548.465	1442391.472
106	02+492	781543.437	1442382.828
107	02+502	781538.409	1442374.184
108	02+512	781533.381	1442365.540
109	02+522	781528.352	1442356.896
110	02+532	781523.324	1442348.253
111	02+542	781518.296	1442339.609
112	02+552	781513.268	1442330.965
113	02+562	781508.240	1442322.321
114	02+572	781503.211	1442313.677
115	02+582	781498.183	1442305.033
116	02+592	781493.155	1442296.389
117	02+602	781488.127	1442287.745
118	02+612	781483.098	1442279.101
119	02+622	781478.070	1442270.457
120	02+632	781473.042	1442261.814
121	02+642	781468.014	1442253.170
122	02+652	781462.986	1442244.526
123	02+662	781457.957	1442235.882
124	02+672	781452.929	1442227.238
125	02+682	781447.901	1442218.594
126	02+692	781442.873	1442209.950
127	02+702	781437.844	1442201.306
128	02+712	781432.816	1442192.662
129	02+722	781427.788	1442184.018
130	02+732	781422.760	1442175.375
131	02+742	781417.732	1442166.731
132	02+752	781412.703	1442158.087

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
133	02+762	781407.675	1442149.443
134	02+772	781402.647	1442140.799
135	02+782	781397.619	1442132.155
136	02+792	781392.590	1442123.511
137	02+802	781387.562	1442114.867
138	02+812	781382.534	1442106.223
139	02+822	781377.506	1442097.580
140	02+832	781372.478	1442088.936
141	02+842	781367.449	1442080.292
142	02+852	781362.421	1442071.648
143	02+862	781357.393	1442063.004
144	02+872	781352.365	1442054.360
145	02+882	781347.336	1442045.716
146	02+892	781342.308	1442037.072
147	02+902	781337.280	1442028.428
148	02+912	781332.252	1442019.784
149	02+922	781327.224	1442011.141
150	02+932	781322.195	1442002.497
151	02+942	781317.167	1441993.853
152	02+952	781312.139	1441985.209
153	02+962	781307.111	1441976.565
154	02+972	781302.082	1441967.921
155	02+982	781297.054	1441959.277
156	02+992	781292.026	1441950.633
157	03+002	781286.998	1441941.989
158	03+012	781281.970	1441933.345
159	03+022	781276.941	1441924.702
160	03+032	781271.913	1441916.058
161	03+042	781266.885	1441907.414
162	03+052	781261.857	1441898.770
163	03+062	781256.829	1441890.126
164	03+072	781251.800	1441881.482
165	03+082	781246.772	1441872.838
166	03+092	781241.744	1441864.194
167	03+102	781236.716	1441855.550
168	03+112	781231.687	1441846.906
169	03+122	781226.659	1441838.263
170	03+132	781221.631	1441829.619
171	03+142	781216.603	1441820.975
172	03+152	781211.575	1441812.331
173	03+162	781206.546	1441803.687
174	03+172	781201.518	1441795.043
175	03+182	781196.490	1441786.399
176	03+192	781191.462	1441777.755
177	03+202	781186.433	1441769.111
178	03+212	781181.405	1441760.467
179	03+222	781176.377	1441751.824
180	03+232	781171.349	1441743.180
181	03+242	781166.321	1441734.536
182	03+252	781161.292	1441725.892
183	03+262	781156.264	1441717.248
184	03+272	781151.236	1441708.604
185	03+282	781146.208	1441699.960

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
186	03+292	781141.179	1441691.316
187	03+302	781136.151	1441682.672
188	03+312	781131.123	1441674.028
189	03+322	781126.095	1441665.385
190	03+332	781121.067	1441656.741
191	03+342	781116.038	1441648.097
192	03+352	781111.010	1441639.453
193	03+362	781105.982	1441630.809
194	03+372	781100.954	1441622.165
195	03+382	781095.925	1441613.521
196	03+392	781090.897	1441604.877
197	03+402	781085.869	1441596.233
198	03+412	781080.841	1441587.589
199	03+422	781075.813	1441578.946
200	03+432	781070.784	1441570.302
201	03+442	781065.756	1441561.658
202	03+452	781060.728	1441553.014
203	03+462	781055.700	1441544.370
204	03+472	781050.671	1441535.726
205	03+482	781045.643	1441527.082
206	03+492	781040.615	1441518.438
207	03+502	781035.587	1441509.794
208	03+512	781030.559	1441501.150
209	03+522	781025.530	1441492.507
210	03+532	781020.502	1441483.863
211	03+542	781015.474	1441475.219
212	03+552	781010.446	1441466.575
213	03+562	781005.417	1441457.931
214	03+572	781000.389	1441449.287
215	03+582	780995.361	1441440.643
216	03+592	780990.333	1441431.999
217	03+602	780985.305	1441423.355
218	03+612	780980.276	1441414.711
219	03+622	780975.248	1441406.068
220	03+632	780970.220	1441397.424
221	03+642	780965.192	1441388.780
222	03+652	780960.164	1441380.136
223	03+662	780955.135	1441371.492
224	03+672	780950.107	1441362.848
225	03+682	780945.079	1441354.204
226	03+692	780940.051	1441345.560
227	03+702	780935.022	1441336.916
228	03+712	780929.994	1441328.272
229	03+722	780924.966	1441319.629
230	03+732	780919.938	1441310.985
231	03+742	780914.910	1441302.341
232	03+752	780909.881	1441293.697
233	03+762	780904.853	1441285.053
234	03+772	780899.825	1441276.409
235	03+782	780894.797	1441267.765
236	03+792	780889.768	1441259.121
237	03+802	780884.740	1441250.477
238	03+812	780879.712	1441241.833

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
239	03+822	780874.684	1441233.190
240	03+832	780869.656	1441224.546
241	03+842	780864.627	1441215.902
242	03+852	780859.599	1441207.258
243	03+862	780854.571	1441198.614
244	03+872	780849.543	1441189.970
245	03+882	780844.514	1441181.326
246	03+892	780839.486	1441172.682
247	03+902	780834.458	1441164.038
248	03+912	780829.430	1441155.394
249	03+922	780824.402	1441146.751
250	03+932	780819.373	1441138.107
251	03+942	780814.345	1441129.463
252	03+952	780809.317	1441120.819
253	03+962	780804.289	1441112.175
254	03+972	780799.260	1441103.531
255	03+982	780794.232	1441094.887
256	03+992	780789.204	1441086.243
257	04+002	780784.176	1441077.599
258	04+012	780779.148	1441068.955
259	04+022	780774.119	1441060.312
260	04+032	780769.091	1441051.668
261	04+042	780764.063	1441043.024
262	04+052	780759.035	1441034.380
263	04+062	780754.006	1441025.736
264	04+072	780748.978	1441017.092
265	04+082	780743.950	1441008.448
266	04+092	780738.922	1440999.804
267	04+102	780733.894	1440991.160
268	04+112	780728.865	1440982.516
269	04+122	780723.837	1440973.873
270	04+132	780718.809	1440965.229
271	04+142	780713.781	1440956.585
272	04+152	780708.752	1440947.941
273	04+162	780703.724	1440939.297
274	04+172	780698.696	1440930.653
275	04+182	780693.668	1440922.009
276	04+192	780688.640	1440913.365
277	04+202	780683.611	1440904.721
278	04+212	780678.583	1440896.077
279	04+222	780673.555	1440887.434
280	04+232	780668.527	1440878.790
281	04+242	780663.499	1440870.146
282	04+252	780658.470	1440861.502
283	04+262	780653.442	1440852.858
284	04+272	780648.414	1440844.214
285	04+282	780643.386	1440835.570
286	04+292	780638.357	1440826.926
287	04+302	780633.329	1440818.282
288	04+312	780628.301	1440809.638
289	04+322	780623.273	1440800.995
290	04+332	780618.245	1440792.351
291	04+342	780613.216	1440783.707

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
292	04+352	780608.189	1440775.062
293	04+362	780603.192	1440766.400
294	04+372	780598.277	1440757.692
295	04+382	780593.469	1440748.923
296	04+392	780588.772	1440740.095
297	04+402	780584.186	1440731.209
298	04+412	780579.711	1440722.266
299	04+422	780575.348	1440713.268
300	04+432	780571.097	1440704.217
301	04+442	780566.961	1440695.112
302	04+452	780562.938	1440685.957
303	04+462	780559.030	1440676.752
304	04+472	780555.238	1440667.500
305	04+482	780551.562	1440658.200
306	04+492	780548.002	1440648.855
307	04+502	780544.559	1440639.467
308	04+512	780541.233	1440630.036
309	04+522	780538.026	1440620.564
310	04+532	780534.938	1440611.053
311	04+542	780531.969	1440601.504
312	04+552	780529.119	1440591.919
313	04+562	780526.389	1440582.299
314	04+572	780523.780	1440572.645
315	04+582	780521.291	1440562.960
316	04+592	780518.924	1440553.244
317	04+602	780516.679	1440543.499
318	04+612	780514.555	1440533.727
319	04+622	780512.554	1440523.930
320	04+632	780510.676	1440514.108
321	04+642	780508.920	1440504.263
322	04+652	780507.287	1440494.398
323	04+662	780505.778	1440484.512
324	04+672	780504.393	1440474.609
325	04+682	780503.132	1440464.689
326	04+692	780501.994	1440454.754
327	04+702	780500.981	1440444.805
328	04+712	780500.093	1440434.845
329	04+722	780499.329	1440424.874
330	04+732	780498.689	1440414.894
331	04+742	780498.175	1440404.908
332	04+752	780497.785	1440394.915
333	04+762	780497.520	1440384.919
334	04+772	780497.380	1440374.920
335	04+782	780497.349	1440364.920
336	04+792	780497.371	1440354.920
337	04+802	780497.398	1440344.920
338	04+812	780497.426	1440334.920
339	04+822	780497.453	1440324.920
340	04+832	780497.481	1440314.920
341	04+842	780497.509	1440304.920
342	04+852	780497.536	1440294.920
343	04+862	780497.564	1440284.920
344	04+872	780497.591	1440274.920

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
345	04+882	780497.619	1440264.921
346	04+892	780497.646	1440254.921
347	04+902	780497.674	1440244.921
348	04+912	780497.702	1440234.921
349	04+922	780497.729	1440224.921
350	04+932	780497.757	1440214.921
351	04+942	780497.784	1440204.921
352	04+952	780497.812	1440194.921
353	04+962	780497.840	1440184.921
354	04+972	780497.867	1440174.921
355	04+982	780497.895	1440164.921
356	04+992	780497.922	1440154.921
357	05+002	780497.950	1440144.921
358	05+012	780497.978	1440134.921
359	05+022	780498.005	1440124.921
360	05+032	780498.033	1440114.921
361	05+042	780498.060	1440104.921
362	05+052	780498.088	1440094.921
363	05+062	780498.115	1440084.921
364	05+072	780498.143	1440074.921
365	05+082	780498.171	1440064.921
366	05+092	780498.198	1440054.921
367	05+102	780498.226	1440044.921
368	05+112	780498.253	1440034.921
369	05+122	780498.281	1440024.921
370	05+132	780498.309	1440014.921
371	05+142	780498.336	1440004.921
372	05+152	780498.364	1439994.922
373	05+162	780498.391	1439984.922
374	05+172	780498.419	1439974.922
375	05+182	780498.446	1439964.922
376	05+192	780498.474	1439954.922
377	05+202	780498.502	1439944.922
378	05+212	780498.529	1439934.922
379	05+222	780498.557	1439924.922
380	05+232	780498.584	1439914.922
381	05+242	780498.612	1439904.922
382	05+252	780498.640	1439894.922
383	05+262	780498.667	1439884.922
384	05+272	780498.695	1439874.922
385	05+282	780498.722	1439864.922
386	05+292	780498.750	1439854.922
387	05+302	780498.778	1439844.922
388	05+312	780498.805	1439834.922
389	05+322	780498.833	1439824.922
390	05+332	780498.860	1439814.922
391	05+342	780498.888	1439804.922
392	05+352	780498.915	1439794.922
393	05+362	780498.943	1439784.922
394	05+372	780498.971	1439774.922
395	05+382	780498.998	1439764.922
396	05+392	780499.026	1439754.922
397	05+402	780499.053	1439744.922

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
398	05+412	780499.081	1439734.923
399	05+422	780499.109	1439724.923
400	05+432	780499.136	1439714.923
401	05+442	780499.164	1439704.923
402	05+452	780499.191	1439694.923
403	05+462	780499.219	1439684.923
404	05+472	780499.246	1439674.923
405	05+482	780499.274	1439664.923
406	05+492	780499.302	1439654.923
407	05+502	780499.329	1439644.923
408	05+512	780499.357	1439634.923
409	05+522	780499.384	1439624.923
410	05+532	780499.412	1439614.923
411	05+542	780499.440	1439604.923
412	05+552	780499.467	1439594.923
413	05+562	780499.495	1439584.923
414	05+572	780499.522	1439574.923
415	05+582	780499.550	1439564.923
416	05+592	780499.578	1439554.923
417	05+602	780499.605	1439544.923
418	05+612	780499.633	1439534.923
419	05+622	780499.660	1439524.923
420	05+632	780499.688	1439514.923
421	05+642	780499.715	1439504.923
422	05+652	780499.743	1439494.923
423	05+662	780499.771	1439484.923
424	05+672	780499.798	1439474.924
425	05+682	780499.826	1439464.924
426	05+692	780499.853	1439454.924
427	05+702	780499.881	1439444.924
428	05+712	780499.909	1439434.924
429	05+722	780499.936	1439424.924
430	05+732	780499.964	1439414.924
431	05+742	780499.991	1439404.924
432	05+752	780500.019	1439394.924
433	05+762	780500.046	1439384.924
434	05+772	780500.074	1439374.924
435	05+782	780500.102	1439364.924
436	05+792	780500.129	1439354.924
437	05+802	780500.157	1439344.924
438	05+812	780500.184	1439334.924
439	05+822	780500.212	1439324.924
440	05+832	780500.240	1439314.924
441	05+842	780500.267	1439304.924
442	05+852	780500.295	1439294.924
443	05+862	780500.322	1439284.924
444	05+872	780500.350	1439274.924
445	05+882	780500.378	1439264.924
446	05+892	780500.405	1439254.924
447	05+902	780500.433	1439244.924
448	05+912	780500.460	1439234.924
449	05+922	780500.488	1439224.924
450	05+932	780500.515	1439214.925

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
451	05+942	780500.543	1439204.925
452	05+952	780500.571	1439194.925
453	05+962	780500.598	1439184.925
454	05+972	780500.626	1439174.925
455	05+982	780500.653	1439164.925
456	05+992	780500.681	1439154.925
457	06+002	780500.709	1439144.925
458	06+012	780500.736	1439134.925
459	06+022	780500.764	1439124.925
460	06+032	780500.791	1439114.925
461	06+042	780500.819	1439104.925
462	06+052	780500.847	1439094.925
463	06+062	780500.874	1439084.925
464	06+072	780500.902	1439074.925
465	06+082	780500.929	1439064.925
466	06+092	780500.957	1439054.925
467	06+102	780500.984	1439044.925
468	06+112	780501.012	1439034.925
469	06+122	780501.040	1439024.925
470	06+132	780501.067	1439014.925
471	06+142	780501.095	1439004.925
472	06+152	780501.122	1438994.925
473	06+162	780501.150	1438984.925
474	06+172	780501.178	1438974.925
475	06+182	780501.205	1438964.925
476	06+192	780501.233	1438954.925
477	06+202	780501.260	1438944.926
478	06+212	780501.288	1438934.926
479	06+222	780501.315	1438924.926
480	06+232	780501.343	1438914.926
481	06+242	780501.371	1438904.926
482	06+252	780501.398	1438894.926
483	06+262	780501.426	1438884.926
484	06+272	780501.453	1438874.926
485	06+282	780501.481	1438864.926
486	06+292	780501.509	1438854.926
487	06+302	780501.536	1438844.926
488	06+312	780501.564	1438834.926
489	06+322	780501.591	1438824.926
490	06+332	780501.619	1438814.926
491	06+342	780501.647	1438804.926
492	06+352	780501.674	1438794.926
493	06+362	780501.702	1438784.926
494	06+372	780501.729	1438774.926
495	06+382	780501.757	1438764.926
496	06+392	780501.784	1438754.926
497	06+402	780501.812	1438744.926
498	06+412	780501.840	1438734.926
499	06+422	780501.867	1438724.926
500	06+432	780501.895	1438714.926
501	06+442	780501.922	1438704.926
502	06+452	780501.950	1438694.926
503	06+462	780501.978	1438684.927

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
504	06+472	780502.005	1438674.927
505	06+482	780502.033	1438664.927
506	06+492	780502.060	1438654.927
507	06+502	780502.088	1438644.927
508	06+512	780502.115	1438634.927
509	06+522	780502.143	1438624.927
510	06+532	780502.167	1438614.927
511	06+542	780502.172	1438604.927
512	06+552	780502.135	1438594.927
513	06+562	780502.036	1438584.927
514	06+572	780501.857	1438574.929
515	06+582	780501.596	1438564.932
516	06+592	780501.251	1438554.938
517	06+602	780500.823	1438544.948
518	06+612	780500.311	1438534.961
519	06+622	780499.716	1438524.978
520	06+632	780499.039	1438515.002
521	06+642	780498.278	1438505.031
522	06+652	780497.433	1438495.066
523	06+662	780496.506	1438485.109
524	06+672	780495.496	1438475.161
525	06+682	780494.404	1438465.220
526	06+692	780493.228	1438455.290
527	06+702	780491.970	1438445.369
528	06+712	780490.629	1438435.460
529	06+722	780489.205	1438425.562
530	06+732	780487.699	1438415.676
531	06+742	780486.111	1438405.803
532	06+752	780484.440	1438395.943
533	06+762	780482.688	1438386.098
534	06+772	780480.853	1438376.268
535	06+782	780478.937	1438366.453
536	06+792	780476.938	1438356.655
537	06+802	780474.859	1438346.873
538	06+812	780472.697	1438337.110
539	06+822	780470.455	1438327.365
540	06+832	780468.131	1438317.638
541	06+842	780465.727	1438307.932
542	06+852	780463.241	1438298.246
543	06+862	780460.675	1438288.580
544	06+872	780458.029	1438278.937
545	06+882	780455.302	1438269.316
546	06+892	780452.495	1438259.718
547	06+902	780449.609	1438250.144
548	06+912	780446.642	1438240.594
549	06+922	780443.596	1438231.069
550	06+932	780440.471	1438221.570
551	06+942	780437.267	1438212.097
552	06+952	780433.984	1438202.651
553	06+962	780430.622	1438193.233
554	06+972	780427.182	1438183.844
555	06+982	780423.664	1438174.483
556	06+992	780420.068	1438165.152

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
557	07+002	780416.395	1438155.851
558	07+012	780412.644	1438146.582
559	07+022	780408.816	1438137.343
560	07+032	780404.911	1438128.137
561	07+042	780400.929	1438118.964
562	07+052	780396.871	1438109.824
563	07+062	780392.737	1438100.719
564	07+072	780388.528	1438091.648
565	07+082	780384.243	1438082.613
566	07+092	780379.883	1438073.613
567	07+102	780375.448	1438064.650
568	07+112	780370.951	1438055.719
569	07+122	780366.409	1438046.810
570	07+132	780361.841	1438037.914
571	07+142	780357.265	1438029.022
572	07+152	780352.689	1438020.131
573	07+162	780348.113	1438011.239
574	07+172	780343.537	1438002.348
575	07+182	780338.961	1437993.456
576	07+192	780334.385	1437984.565
577	07+202	780329.809	1437975.673
578	07+212	780325.233	1437966.782
579	07+222	780320.657	1437957.890
580	07+232	780316.081	1437948.998
581	07+242	780311.505	1437940.107
582	07+252	780306.929	1437931.215
583	07+262	780302.353	1437922.324
584	07+272	780297.777	1437913.432
585	07+282	780293.201	1437904.541
586	07+292	780288.624	1437895.649
587	07+302	780284.048	1437886.757
588	07+312	780279.472	1437877.866
589	07+322	780274.896	1437868.974
590	07+332	780270.320	1437860.083
591	07+342	780265.744	1437851.191
592	07+352	780261.168	1437842.300
593	07+362	780256.592	1437833.408
594	07+372	780252.016	1437824.517
595	07+382	780247.440	1437815.625
596	07+392	780242.872	1437806.729
597	07+402	780238.329	1437797.821
598	07+412	780233.829	1437788.891
599	07+422	780229.392	1437779.929
600	07+432	780225.029	1437770.931
601	07+442	780220.741	1437761.897
602	07+452	780216.529	1437752.827
603	07+462	780212.392	1437743.723
604	07+472	780208.331	1437734.585
605	07+482	780204.347	1437725.413
606	07+492	780200.439	1437716.208
607	07+502	780196.608	1437706.971
608	07+512	780192.854	1437697.702
609	07+522	780189.178	1437688.403

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
610	07+532	780185.579	1437679.073
611	07+542	780182.058	1437669.713
612	07+552	780178.615	1437660.325
613	07+562	780175.251	1437650.908
614	07+572	780171.965	1437641.463
615	07+582	780168.757	1437631.991
616	07+592	780165.629	1437622.493
617	07+602	780162.581	1437612.969
618	07+612	780159.611	1437603.420
619	07+622	780156.721	1437593.847
620	07+632	780153.912	1437584.250
621	07+642	780151.182	1437574.630
622	07+652	780148.532	1437564.987
623	07+662	780145.963	1437555.323
624	07+672	780143.475	1437545.637
625	07+682	780141.067	1437535.931
626	07+692	780138.741	1437526.206
627	07+702	780136.495	1437516.461
628	07+712	780134.331	1437506.698
629	07+722	780132.248	1437496.918
630	07+732	780130.247	1437487.120
631	07+742	780128.328	1437477.306
632	07+752	780126.490	1437467.476
633	07+762	780124.734	1437457.632
634	07+772	780123.061	1437447.773
635	07+782	780121.469	1437437.900
636	07+792	780119.960	1437428.015
637	07+802	780118.534	1437418.117
638	07+812	780117.190	1437408.208
639	07+822	780115.928	1437398.288
640	07+832	780114.749	1437388.357
641	07+842	780113.653	1437378.418
642	07+852	780112.640	1437368.469
643	07+862	780111.710	1437358.513
644	07+872	780110.863	1437348.549
645	07+882	780110.097	1437338.578
646	07+892	780109.396	1437328.603
647	07+902	780108.741	1437318.624
648	07+912	780108.109	1437308.644
649	07+922	780107.483	1437298.664
650	07+932	780106.857	1437288.683
651	07+942	780106.231	1437278.703
652	07+952	780105.605	1437268.723
653	07+962	780104.979	1437258.742
654	07+972	780104.353	1437248.762
655	07+982	780103.727	1437238.781
656	07+992	780103.101	1437228.801
657	08+002	780102.475	1437218.821
658	08+012	780101.849	1437208.840
659	08+022	780101.223	1437198.860
660	08+032	780100.596	1437188.879
661	08+042	780099.970	1437178.899
662	08+052	780099.344	1437168.919

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
663	08+062	780098.718	1437158.938
664	08+072	780098.092	1437148.958
665	08+082	780097.466	1437138.978
666	08+092	780096.840	1437128.997
667	08+102	780096.214	1437119.017
668	08+112	780095.588	1437109.036
669	08+122	780094.962	1437099.056
670	08+132	780094.336	1437089.076
671	08+142	780093.710	1437079.095
672	08+152	780093.084	1437069.115
673	08+162	780092.458	1437059.135
674	08+172	780091.831	1437049.154
675	08+182	780091.205	1437039.174
676	08+192	780090.579	1437029.193
677	08+202	780089.953	1437019.213
678	08+212	780089.327	1437009.233
679	08+222	780088.701	1436999.252
680	08+232	780088.075	1436989.272
681	08+242	780087.449	1436979.291
682	08+252	780086.823	1436969.311
683	08+262	780086.197	1436959.331
684	08+272	780085.571	1436949.350
685	08+282	780084.945	1436939.370
686	08+292	780084.319	1436929.390
687	08+302	780083.692	1436919.409
688	08+312	780083.066	1436909.429
689	08+322	780082.440	1436899.448
690	08+332	780081.814	1436889.468
691	08+342	780081.188	1436879.488
692	08+352	780080.562	1436869.507
693	08+362	780079.936	1436859.527
694	08+372	780079.310	1436849.546
695	08+382	780078.684	1436839.566
696	08+392	780078.058	1436829.586
697	08+402	780077.432	1436819.605
698	08+412	780076.806	1436809.625
699	08+422	780076.180	1436799.645
700	08+432	780075.553	1436789.664
701	08+442	780074.927	1436779.684
702	08+452	780074.301	1436769.703
703	08+462	780073.675	1436759.723
704	08+472	780073.049	1436749.743
705	08+482	780072.423	1436739.762
706	08+492	780071.797	1436729.782
707	08+502	780071.171	1436719.802
708	08+512	780070.545	1436709.821
709	08+522	780069.919	1436699.841
710	08+532	780069.293	1436689.860
711	08+542	780068.667	1436679.880
712	08+552	780068.041	1436669.900
713	08+562	780067.415	1436659.919
714	08+572	780066.788	1436649.939
715	08+582	780066.162	1436639.958

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
716	08+592	780065.536	1436629.978
717	08+602	780064.910	1436619.998
718	08+612	780064.284	1436610.017
719	08+622	780063.658	1436600.037
720	08+632	780063.032	1436590.057
721	08+642	780062.406	1436580.076
722	08+652	780061.780	1436570.096
723	08+662	780061.154	1436560.115
724	08+672	780060.528	1436550.135
725	08+682	780059.902	1436540.155
726	08+692	780059.276	1436530.174
727	08+702	780058.649	1436520.194
728	08+712	780058.023	1436510.213
729	08+722	780057.397	1436500.233
730	08+732	780056.771	1436490.253
731	08+742	780056.145	1436480.272

Edge line Coordinates of Tube-II (RHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting	Northing
1	00+000	781253.094	1444318.567
2	00+010	781250.931	1444308.804
3	00+020	781248.768	1444299.040
4	00+030	781246.605	1444289.277
5	00+040	781244.442	1444279.514
6	00+050	781242.279	1444269.751
7	00+060	781240.116	1444259.987
8	00+070	781237.953	1444250.224
9	00+080	781235.790	1444240.461
10	00+090	781233.627	1444230.697
11	00+100	781231.465	1444220.934
12	00+110	781229.302	1444211.171
13	00+120	781227.139	1444201.408
14	00+130	781224.976	1444191.644
15	00+140	781222.791	1444181.886
16	00+150	781220.493	1444172.154
17	00+160	781218.074	1444162.451
18	00+170	781215.534	1444152.779
19	00+180	781212.873	1444143.139
20	00+190	781210.092	1444133.534
21	00+200	781207.192	1444123.964
22	00+210	781204.171	1444114.431
23	00+220	781201.056	1444104.928
24	00+230	781197.933	1444095.429
25	00+240	781194.812	1444085.928
26	00+250	781191.770	1444076.402
27	00+260	781188.847	1444066.839
28	00+270	781186.028	1444057.245
29	00+280	781183.225	1444047.646
30	00+290	781180.421	1444038.047
31	00+300	781177.617	1444028.448
32	00+310	781174.814	1444018.849
33	00+320	781172.010	1444009.250
34	00+330	781169.171	1443999.661

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting	Northing
35	00+340	781166.186	1443990.118
36	00+350	781162.972	1443980.648
37	00+360	781159.524	1443971.262
38	00+370	781155.841	1443961.965
39	00+380	781151.928	1443952.763
40	00+390	781147.818	1443943.647
41	00+400	781143.616	1443934.572
42	00+410	781139.405	1443925.502
43	00+420	781135.195	1443916.432
44	00+430	781130.984	1443907.361
45	00+440	781126.773	1443898.291
46	00+450	781122.562	1443889.221
47	00+460	781118.351	1443880.151
48	00+470	781114.140	1443871.081
49	00+480	781109.929	1443862.011
50	00+490	781105.718	1443852.940
51	00+500	781101.509	1443843.869
52	00+510	781097.361	1443834.770
53	00+520	781093.406	1443825.586
54	00+530	781089.784	1443816.266
55	00+540	781086.640	1443806.774
56	00+550	781084.124	1443797.098
57	00+560	781082.393	1443787.253
58	00+570	781081.606	1443777.288
59	00+580	781081.898	1443767.297
60	00+590	781083.296	1443757.401
61	00+600	781085.783	1443747.720
62	00+610	781089.328	1443738.375
63	00+620	781093.887	1443729.481
64	00+630	781099.405	1443721.147
65	00+640	781105.800	1443713.465
66	00+650	781112.917	1443706.446
67	00+660	781120.595	1443700.042
68	00+670	781128.694	1443694.179
69	00+680	781137.096	1443688.758
70	00+690	781145.703	1443683.668
71	00+700	781154.430	1443678.785
72	00+710	781163.203	1443673.985
73	00+720	781171.978	1443669.190
74	00+730	781180.746	1443664.382
75	00+740	781189.463	1443659.481
76	00+750	781198.069	1443654.389
77	00+760	781206.500	1443649.013
78	00+770	781214.712	1443643.307
79	00+780	781222.689	1443637.278
80	00+790	781230.433	1443630.952
81	00+800	781237.999	1443624.413
82	00+810	781245.457	1443617.752
83	00+820	781252.880	1443611.051
84	00+830	781260.301	1443604.348
85	00+840	781267.724	1443597.648
86	00+850	781275.193	1443590.998
87	00+860	781282.801	1443584.509

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting	Northing
88	00+870	781290.638	1443578.298
89	00+880	781298.780	1443572.495
90	00+890	781307.274	1443567.221
91	00+900	781316.100	1443562.525
92	00+910	781325.220	1443558.427
93	00+920	781334.593	1443554.946
94	00+930	781344.176	1443552.097
95	00+940	781353.927	1443549.888
96	00+950	781363.791	1443548.250
97	00+960	781373.718	1443547.044
98	00+970	781383.675	1443546.124
99	00+980	781393.645	1443545.343
100	00+990	781403.616	1443544.583
101	01+000	781413.587	1443543.823
102	01+010	781423.558	1443543.062
103	01+020	781433.529	1443542.302
104	01+030	781443.500	1443541.542
105	01+040	781453.471	1443540.781
106	01+050	781463.442	1443540.021
107	01+060	781473.413	1443539.261
108	01+070	781483.384	1443538.501
109	01+080	781493.355	1443537.740
110	01+090	781503.326	1443536.980
111	01+100	781513.297	1443536.220
112	01+110	781523.268	1443535.459
113	01+120	781533.239	1443534.699
114	01+130	781543.208	1443533.913
115	01+140	781553.166	1443532.992
116	01+150	781563.096	1443531.813
117	01+160	781572.972	1443530.252
118	01+170	781582.762	1443528.216
119	01+180	781592.437	1443525.693
120	01+190	781601.974	1443522.690
121	01+200	781611.350	1443519.214
122	01+210	781620.539	1443515.273
123	01+220	781629.521	1443510.878
124	01+230	781638.271	1443506.040
125	01+240	781646.769	1443500.770
126	01+250	781654.993	1443495.083
127	01+260	781662.922	1443488.991
128	01+270	781670.537	1443482.511
129	01+280	781677.818	1443475.658
130	01+290	781684.748	1443468.450
131	01+300	781691.309	1443460.905
132	01+310	781697.484	1443453.041
133	01+320	781703.259	1443444.878
134	01+330	781708.619	1443436.437
135	01+340	781713.550	1443427.739
136	01+350	781718.040	1443418.805
137	01+360	781722.078	1443409.657
138	01+370	781725.678	1443400.329
139	01+380	781728.934	1443390.874
140	01+390	781731.962	1443381.343

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

Sr. No.	Station	Easting	Northing
141	01+395	781733.427	1443376.563

Centerline Coordinates of Tube-II (RHS)

SL No.	Chainage (m)	Easting-X	Northing-Y
1	01+405	781729.888	1443365.041
2	01+415	781732.789	1443355.471
3	01+425	781735.689	1443345.901
4	01+435	781738.590	1443336.331
5	01+445	781741.491	1443326.761
6	01+455	781744.391	1443317.191
7	01+465	781747.292	1443307.621
8	01+475	781750.193	1443298.051
9	01+485	781753.093	1443288.481
10	01+495	781755.994	1443278.910
11	01+505	781758.894	1443269.340
12	01+515	781761.795	1443259.770
13	01+525	781764.696	1443250.200
14	01+535	781767.596	1443240.630
15	01+545	781770.497	1443231.060
16	01+555	781773.380	1443221.485
17	01+565	781776.195	1443211.889
18	01+575	781778.890	1443202.259
19	01+585	781781.428	1443192.587
20	01+595	781783.804	1443182.873
21	01+605	781786.018	1443173.121
22	01+615	781788.068	1443163.334
23	01+625	781789.956	1443153.514
24	01+635	781791.680	1443143.664
25	01+645	781793.239	1443133.786
26	01+655	781794.633	1443123.884
27	01+665	781795.862	1443113.960
28	01+675	781796.926	1443104.017
29	01+685	781797.824	1443094.057
30	01+695	781798.555	1443084.084
31	01+705	781799.121	1443074.100
32	01+715	781799.520	1443064.108
33	01+725	781799.752	1443054.111
34	01+735	781799.817	1443044.112
35	01+745	781799.716	1443034.112
36	01+755	781799.449	1443024.116
37	01+765	781799.015	1443014.125
38	01+775	781798.414	1443004.144
39	01+785	781797.647	1442994.173
40	01+795	781796.714	1442984.217
41	01+805	781795.615	1442974.278
42	01+815	781794.351	1442964.358
43	01+825	781792.921	1442954.461
44	01+835	781791.327	1442944.589
45	01+845	781789.569	1442934.745
46	01+855	781787.646	1442924.931
47	01+865	781785.561	1442915.151
48	01+875	781783.313	1442905.407
49	01+885	781780.902	1442895.702

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
50	01+895	781778.330	1442886.039
51	01+905	781775.598	1442876.420
52	01+915	781772.705	1442866.847
53	01+925	781769.654	1442857.324
54	01+935	781766.444	1442847.853
55	01+945	781763.077	1442838.438
56	01+955	781759.553	1442829.079
57	01+965	781755.874	1442819.781
58	01+975	781752.040	1442810.545
59	01+985	781748.053	1442801.374
60	01+995	781743.914	1442792.271
61	02+005	781739.624	1442783.238
62	02+015	781735.183	1442774.278
63	02+025	781730.594	1442765.394
64	02+035	781725.858	1442756.587
65	02+045	781720.983	1442747.855
66	02+055	781716.011	1442739.179
67	02+065	781710.991	1442730.530
68	02+075	781705.963	1442721.886
69	02+085	781700.935	1442713.242
70	02+095	781695.907	1442704.599
71	02+105	781690.879	1442695.955
72	02+115	781685.850	1442687.311
73	02+125	781680.822	1442678.667
74	02+135	781675.794	1442670.023
75	02+145	781670.766	1442661.379
76	02+155	781665.737	1442652.735
77	02+165	781660.709	1442644.091
78	02+175	781655.681	1442635.447
79	02+185	781650.653	1442626.803
80	02+195	781645.625	1442618.160
81	02+205	781640.596	1442609.516
82	02+215	781635.568	1442600.872
83	02+225	781630.540	1442592.228
84	02+235	781625.512	1442583.584
85	02+245	781620.483	1442574.940
86	02+255	781615.455	1442566.296
87	02+265	781610.427	1442557.652
88	02+275	781605.399	1442549.008
89	02+285	781600.371	1442540.364
90	02+295	781595.342	1442531.721
91	02+305	781590.314	1442523.077
92	02+315	781585.286	1442514.433
93	02+325	781580.258	1442505.789
94	02+335	781575.229	1442497.145
95	02+345	781570.201	1442488.501
96	02+355	781565.173	1442479.857
97	02+365	781560.145	1442471.213
98	02+375	781555.117	1442462.569
99	02+385	781550.088	1442453.925
100	02+395	781545.060	1442445.282
101	02+405	781540.032	1442436.638
102	02+415	781535.004	1442427.994

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
103	02+425	781529.975	1442419.350
104	02+435	781524.947	1442410.706
105	02+445	781519.919	1442402.062
106	02+455	781514.891	1442393.418
107	02+465	781509.863	1442384.774
108	02+475	781504.834	1442376.130
109	02+485	781499.806	1442367.486
110	02+495	781494.778	1442358.843
111	02+505	781489.750	1442350.199
112	02+515	781484.721	1442341.555
113	02+525	781479.693	1442332.911
114	02+535	781474.665	1442324.267
115	02+545	781469.637	1442315.623
116	02+555	781464.609	1442306.979
117	02+565	781459.580	1442298.335
118	02+575	781454.552	1442289.691
119	02+585	781449.524	1442281.047
120	02+595	781444.496	1442272.404
121	02+605	781439.467	1442263.760
122	02+615	781434.439	1442255.116
123	02+625	781429.411	1442246.472
124	02+635	781424.383	1442237.828
125	02+645	781419.355	1442229.184
126	02+655	781414.326	1442220.540
127	02+665	781409.298	1442211.896
128	02+675	781404.270	1442203.252
129	02+685	781399.242	1442194.608
130	02+695	781394.214	1442185.965
131	02+705	781389.185	1442177.321
132	02+715	781384.157	1442168.677
133	02+725	781379.129	1442160.033
134	02+735	781374.101	1442151.389
135	02+745	781369.072	1442142.745
136	02+755	781364.044	1442134.101
137	02+765	781359.016	1442125.457
138	02+775	781353.988	1442116.813
139	02+785	781348.960	1442108.169
140	02+795	781343.931	1442099.526
141	02+805	781338.903	1442090.882
142	02+815	781333.875	1442082.238
143	02+825	781328.847	1442073.594
144	02+835	781323.818	1442064.950
145	02+845	781318.790	1442056.306
146	02+855	781313.762	1442047.662
147	02+865	781308.734	1442039.018
148	02+875	781303.706	1442030.374
149	02+885	781298.677	1442021.730
150	02+895	781293.649	1442013.087
151	02+905	781288.621	1442004.443
152	02+915	781283.593	1441995.799
153	02+925	781278.564	1441987.155
154	02+935	781273.536	1441978.511
155	02+945	781268.508	1441969.867

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
156	02+955	781263.480	1441961.223
157	02+965	781258.452	1441952.579
158	02+975	781253.423	1441943.935
159	02+985	781248.395	1441935.291
160	02+995	781243.367	1441926.648
161	03+005	781238.339	1441918.004
162	03+015	781233.310	1441909.360
163	03+025	781228.282	1441900.716
164	03+035	781223.254	1441892.072
165	03+045	781218.226	1441883.428
166	03+055	781213.198	1441874.784
167	03+065	781208.169	1441866.140
168	03+075	781203.141	1441857.496
169	03+085	781198.113	1441848.852
170	03+095	781193.085	1441840.209
171	03+105	781188.056	1441831.565
172	03+115	781183.028	1441822.921
173	03+125	781178.000	1441814.277
174	03+135	781172.972	1441805.633
175	03+145	781167.944	1441796.989
176	03+155	781162.915	1441788.345
177	03+165	781157.887	1441779.701
178	03+175	781152.859	1441771.057
179	03+185	781147.831	1441762.414
180	03+195	781142.802	1441753.770
181	03+205	781137.774	1441745.126
182	03+215	781132.746	1441736.482
183	03+225	781127.718	1441727.838
184	03+235	781122.690	1441719.194
185	03+245	781117.661	1441710.550
186	03+255	781112.633	1441701.906
187	03+265	781107.605	1441693.262
188	03+275	781102.577	1441684.618
189	03+285	781097.548	1441675.975
190	03+295	781092.520	1441667.331
191	03+305	781087.492	1441658.687
192	03+315	781082.464	1441650.043
193	03+325	781077.436	1441641.399
194	03+335	781072.407	1441632.755
195	03+345	781067.379	1441624.111
196	03+355	781062.351	1441615.467
197	03+365	781057.323	1441606.823
198	03+375	781052.295	1441598.179
199	03+385	781047.266	1441589.536
200	03+395	781042.238	1441580.892
201	03+405	781037.210	1441572.248
202	03+415	781032.182	1441563.604
203	03+425	781027.153	1441554.960
204	03+435	781022.125	1441546.316
205	03+445	781017.097	1441537.672
206	03+455	781012.069	1441529.028
207	03+465	781007.041	1441520.384
208	03+475	781002.012	1441511.740

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
209	03+485	780996.984	1441503.097
210	03+495	780991.956	1441494.453
211	03+505	780986.928	1441485.809
212	03+515	780981.899	1441477.165
213	03+525	780976.871	1441468.521
214	03+535	780971.843	1441459.877
215	03+545	780966.815	1441451.233
216	03+555	780961.787	1441442.589
217	03+565	780956.758	1441433.945
218	03+575	780951.730	1441425.301
219	03+585	780946.702	1441416.658
220	03+595	780941.674	1441408.014
221	03+605	780936.645	1441399.370
222	03+615	780931.617	1441390.726
223	03+625	780926.589	1441382.082
224	03+635	780921.561	1441373.438
225	03+645	780916.533	1441364.794
226	03+655	780911.504	1441356.150
227	03+665	780906.476	1441347.506
228	03+675	780901.448	1441338.862
229	03+685	780896.420	1441330.219
230	03+695	780891.391	1441321.575
231	03+705	780886.363	1441312.931
232	03+715	780881.335	1441304.287
233	03+725	780876.307	1441295.643
234	03+735	780871.279	1441286.999
235	03+745	780866.250	1441278.355
236	03+755	780861.222	1441269.711
237	03+765	780856.194	1441261.067
238	03+775	780851.166	1441252.423
239	03+785	780846.137	1441243.780
240	03+795	780841.109	1441235.136
241	03+805	780836.081	1441226.492
242	03+815	780831.053	1441217.848
243	03+825	780826.025	1441209.204
244	03+835	780820.996	1441200.560
245	03+845	780815.968	1441191.916
246	03+855	780810.940	1441183.272
247	03+865	780805.912	1441174.628
248	03+875	780800.883	1441165.984
249	03+885	780795.855	1441157.341
250	03+895	780790.827	1441148.697
251	03+905	780785.799	1441140.053
252	03+915	780780.771	1441131.409
253	03+925	780775.742	1441122.765
254	03+935	780770.714	1441114.121
255	03+945	780765.686	1441105.477
256	03+955	780760.658	1441096.833
257	03+965	780755.630	1441088.189
258	03+975	780750.601	1441079.545
259	03+985	780745.573	1441070.902
260	03+995	780740.545	1441062.258
261	04+005	780735.517	1441053.614

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
262	04+015	780730.488	1441044.970
263	04+025	780725.460	1441036.326
264	04+035	780720.432	1441027.682
265	04+045	780715.404	1441019.038
266	04+055	780710.376	1441010.394
267	04+065	780705.347	1441001.750
268	04+075	780700.319	1440993.106
269	04+085	780695.291	1440984.463
270	04+095	780690.263	1440975.819
271	04+105	780685.234	1440967.175
272	04+115	780680.206	1440958.531
273	04+125	780675.178	1440949.887
274	04+135	780670.150	1440941.243
275	04+145	780665.122	1440932.599
276	04+155	780660.093	1440923.955
277	04+165	780655.065	1440915.311
278	04+175	780650.037	1440906.667
279	04+185	780645.009	1440898.024
280	04+195	780639.980	1440889.380
281	04+205	780634.952	1440880.736
282	04+215	780629.924	1440872.092
283	04+225	780624.896	1440863.448
284	04+235	780619.868	1440854.804
285	04+245	780614.839	1440846.160
286	04+255	780609.811	1440837.516
287	04+265	780604.783	1440828.872
288	04+275	780599.755	1440820.228
289	04+285	780594.726	1440811.585
290	04+295	780589.698	1440802.941
291	04+305	780584.670	1440794.297
292	04+315	780579.642	1440785.653
293	04+325	780574.631	1440776.999
294	04+335	780569.686	1440768.307
295	04+345	780564.847	1440759.556
296	04+355	780560.117	1440750.745
297	04+365	780555.498	1440741.876
298	04+375	780550.990	1440732.950
299	04+385	780546.594	1440723.968
300	04+395	780542.311	1440714.932
301	04+405	780538.141	1440705.843
302	04+415	780534.085	1440696.702
303	04+425	780530.143	1440687.512
304	04+435	780526.317	1440678.273
305	04+445	780522.606	1440668.987
306	04+455	780519.012	1440659.655
307	04+465	780515.535	1440650.280
308	04+475	780512.175	1440640.861
309	04+485	780508.933	1440631.401
310	04+495	780505.810	1440621.901
311	04+505	780502.805	1440612.363
312	04+515	780499.921	1440602.789
313	04+525	780497.156	1440593.179
314	04+535	780494.511	1440583.535

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
315	04+545	780491.987	1440573.859
316	04+555	780489.584	1440564.152
317	04+565	780487.303	1440554.415
318	04+575	780485.144	1440544.651
319	04+585	780483.107	1440534.861
320	04+595	780481.192	1440525.046
321	04+605	780479.400	1440515.208
322	04+615	780477.732	1440505.348
323	04+625	780476.186	1440495.468
324	04+635	780474.765	1440485.570
325	04+645	780473.467	1440475.655
326	04+655	780472.293	1440465.724
327	04+665	780471.243	1440455.779
328	04+675	780470.318	1440445.822
329	04+685	780469.518	1440435.854
330	04+695	780468.842	1440425.877
331	04+705	780468.290	1440415.893
332	04+715	780467.864	1440405.902
333	04+725	780467.563	1440395.906
334	04+735	780467.386	1440385.908
335	04+745	780467.328	1440375.908
336	04+755	780467.340	1440365.908
337	04+765	780467.368	1440355.908
338	04+775	780467.395	1440345.908
339	04+785	780467.423	1440335.908
340	04+795	780467.451	1440325.908
341	04+805	780467.478	1440315.908
342	04+815	780467.506	1440305.908
343	04+825	780467.533	1440295.908
344	04+835	780467.561	1440285.909
345	04+845	780467.588	1440275.909
346	04+855	780467.616	1440265.909
347	04+865	780467.644	1440255.909
348	04+875	780467.671	1440245.909
349	04+885	780467.699	1440235.909
350	04+895	780467.726	1440225.909
351	04+905	780467.754	1440215.909
352	04+915	780467.782	1440205.909
353	04+925	780467.809	1440195.909
354	04+935	780467.837	1440185.909
355	04+945	780467.864	1440175.909
356	04+955	780467.892	1440165.909
357	04+965	780467.919	1440155.909
358	04+975	780467.947	1440145.909
359	04+985	780467.975	1440135.909
360	04+995	780468.002	1440125.909
361	05+005	780468.030	1440115.909
362	05+015	780468.057	1440105.909
363	05+025	780468.085	1440095.909
364	05+035	780468.113	1440085.909
365	05+045	780468.140	1440075.909
366	05+055	780468.168	1440065.909
367	05+065	780468.195	1440055.909

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
368	05+075	780468.223	1440045.909
369	05+085	780468.251	1440035.909
370	05+095	780468.278	1440025.910
371	05+105	780468.306	1440015.910
372	05+115	780468.333	1440005.910
373	05+125	780468.361	1439995.910
374	05+135	780468.388	1439985.910
375	05+145	780468.416	1439975.910
376	05+155	780468.444	1439965.910
377	05+165	780468.471	1439955.910
378	05+175	780468.499	1439945.910
379	05+185	780468.526	1439935.910
380	05+195	780468.554	1439925.910
381	05+205	780468.582	1439915.910
382	05+215	780468.609	1439905.910
383	05+225	780468.637	1439895.910
384	05+235	780468.664	1439885.910
385	05+245	780468.692	1439875.910
386	05+255	780468.720	1439865.910
387	05+265	780468.747	1439855.910
388	05+275	780468.775	1439845.910
389	05+285	780468.802	1439835.910
390	05+295	780468.830	1439825.910
391	05+305	780468.857	1439815.910
392	05+315	780468.885	1439805.910
393	05+325	780468.913	1439795.910
394	05+335	780468.940	1439785.910
395	05+345	780468.968	1439775.910
396	05+355	780468.995	1439765.911
397	05+365	780469.023	1439755.911
398	05+375	780469.051	1439745.911
399	05+385	780469.078	1439735.911
400	05+395	780469.106	1439725.911
401	05+405	780469.133	1439715.911
402	05+415	780469.161	1439705.911
403	05+425	780469.188	1439695.911
404	05+435	780469.216	1439685.911
405	05+445	780469.244	1439675.911
406	05+455	780469.271	1439665.911
407	05+465	780469.299	1439655.911
408	05+475	780469.326	1439645.911
409	05+485	780469.354	1439635.911
410	05+495	780469.382	1439625.911
411	05+505	780469.409	1439615.911
412	05+515	780469.437	1439605.911
413	05+525	780469.464	1439595.911
414	05+535	780469.492	1439585.911
415	05+545	780469.520	1439575.911
416	05+555	780469.547	1439565.911
417	05+565	780469.575	1439555.911
418	05+575	780469.602	1439545.911
419	05+585	780469.630	1439535.911
420	05+595	780469.657	1439525.911

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
421	05+605	780469.685	1439515.911
422	05+615	780469.713	1439505.911
423	05+625	780469.740	1439495.912
424	05+635	780469.768	1439485.912
425	05+645	780469.795	1439475.912
426	05+655	780469.823	1439465.912
427	05+665	780469.851	1439455.912
428	05+675	780469.878	1439445.912
429	05+685	780469.906	1439435.912
430	05+695	780469.933	1439425.912
431	05+705	780469.961	1439415.912
432	05+715	780469.988	1439405.912
433	05+725	780470.016	1439395.912
434	05+735	780470.044	1439385.912
435	05+745	780470.071	1439375.912
436	05+755	780470.099	1439365.912
437	05+765	780470.126	1439355.912
438	05+775	780470.154	1439345.912
439	05+785	780470.182	1439335.912
440	05+795	780470.209	1439325.912
441	05+805	780470.237	1439315.912
442	05+815	780470.264	1439305.912
443	05+825	780470.292	1439295.912
444	05+835	780470.320	1439285.912
445	05+845	780470.347	1439275.912
446	05+855	780470.375	1439265.912
447	05+865	780470.402	1439255.912
448	05+875	780470.430	1439245.912
449	05+885	780470.457	1439235.913
450	05+895	780470.485	1439225.913
451	05+905	780470.513	1439215.913
452	05+915	780470.540	1439205.913
453	05+925	780470.568	1439195.913
454	05+935	780470.595	1439185.913
455	05+945	780470.623	1439175.913
456	05+955	780470.651	1439165.913
457	05+965	780470.678	1439155.913
458	05+975	780470.706	1439145.913
459	05+985	780470.733	1439135.913
460	05+995	780470.761	1439125.913
461	06+005	780470.788	1439115.913
462	06+015	780470.816	1439105.913
463	06+025	780470.844	1439095.913
464	06+035	780470.871	1439085.913
465	06+045	780470.899	1439075.913
466	06+055	780470.926	1439065.913
467	06+065	780470.954	1439055.913
468	06+075	780470.982	1439045.913
469	06+085	780471.009	1439035.913
470	06+095	780471.037	1439025.913
471	06+105	780471.064	1439015.913
472	06+115	780471.092	1439005.913
473	06+125	780471.120	1438995.913

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
474	06+135	780471.147	1438985.913
475	06+145	780471.175	1438975.914
476	06+155	780471.202	1438965.914
477	06+165	780471.230	1438955.914
478	06+175	780471.257	1438945.914
479	06+185	780471.285	1438935.914
480	06+195	780471.313	1438925.914
481	06+205	780471.340	1438915.914
482	06+215	780471.368	1438905.914
483	06+225	780471.395	1438895.914
484	06+235	780471.423	1438885.914
485	06+245	780471.451	1438875.914
486	06+255	780471.478	1438865.914
487	06+265	780471.506	1438855.914
488	06+275	780471.533	1438845.914
489	06+285	780471.561	1438835.914
490	06+295	780471.588	1438825.914
491	06+305	780471.616	1438815.914
492	06+315	780471.644	1438805.914
493	06+325	780471.671	1438795.914
494	06+335	780471.699	1438785.914
495	06+345	780471.726	1438775.914
496	06+355	780471.754	1438765.914
497	06+365	780471.782	1438755.914
498	06+375	780471.809	1438745.914
499	06+385	780471.837	1438735.914
500	06+395	780471.864	1438725.914
501	06+405	780471.892	1438715.915
502	06+415	780471.920	1438705.915
503	06+425	780471.947	1438695.915
504	06+435	780471.975	1438685.915
505	06+445	780472.002	1438675.915
506	06+455	780472.030	1438665.915
507	06+465	780472.057	1438655.915
508	06+475	780472.085	1438645.915
509	06+485	780472.113	1438635.915
510	06+495	780472.139	1438625.915
511	06+505	780472.154	1438615.915
512	06+515	780472.135	1438605.915
513	06+525	780472.062	1438595.915
514	06+535	780471.914	1438585.916
515	06+545	780471.684	1438575.919
516	06+555	780471.370	1438565.924
517	06+565	780470.973	1438555.932
518	06+575	780470.493	1438545.943
519	06+585	780469.930	1438535.959
520	06+595	780469.283	1438525.980
521	06+605	780468.553	1438516.007
522	06+615	780467.741	1438506.040
523	06+625	780466.845	1438496.080
524	06+635	780465.866	1438486.128
525	06+645	780464.804	1438476.185
526	06+655	780463.660	1438466.251

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
527	06+665	780462.432	1438456.326
528	06+675	780461.122	1438446.412
529	06+685	780459.730	1438436.510
530	06+695	780458.255	1438426.619
531	06+705	780456.698	1438416.741
532	06+715	780455.058	1438406.877
533	06+725	780453.336	1438397.026
534	06+735	780451.532	1438387.190
535	06+745	780449.647	1438377.370
536	06+755	780447.679	1438367.565
537	06+765	780445.630	1438357.777
538	06+775	780443.500	1438348.007
539	06+785	780441.288	1438338.255
540	06+795	780438.995	1438328.521
541	06+805	780436.620	1438318.807
542	06+815	780434.165	1438309.113
543	06+825	780431.630	1438299.440
544	06+835	780429.013	1438289.788
545	06+845	780426.317	1438280.159
546	06+855	780423.540	1438270.552
547	06+865	780420.683	1438260.969
548	06+875	780417.747	1438251.410
549	06+885	780414.731	1438241.875
550	06+895	780411.636	1438232.367
551	06+905	780408.461	1438222.884
552	06+915	780405.208	1438213.428
553	06+925	780401.876	1438203.999
554	06+935	780398.465	1438194.599
555	06+945	780394.976	1438185.227
556	06+955	780391.410	1438175.885
557	06+965	780387.765	1438166.573
558	06+975	780384.043	1438157.291
559	06+985	780380.244	1438148.041
560	06+995	780376.368	1438138.823
561	07+005	780372.415	1438129.637
562	07+015	780368.386	1438120.485
563	07+025	780364.281	1438111.367
564	07+035	780360.100	1438102.283
565	07+045	780355.843	1438093.234
566	07+055	780351.511	1438084.221
567	07+065	780347.104	1438075.244
568	07+075	780342.628	1438066.302
569	07+085	780338.101	1438057.386
570	07+095	780333.540	1438048.486
571	07+105	780328.966	1438039.594
572	07+115	780324.390	1438030.702
573	07+125	780319.814	1438021.811
574	07+135	780315.238	1438012.919
575	07+145	780310.662	1438004.027
576	07+155	780306.086	1437995.136
577	07+165	780301.510	1437986.244
578	07+175	780296.933	1437977.353
579	07+185	780292.357	1437968.461

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
580	07+195	780287.781	1437959.570
581	07+205	780283.205	1437950.678
582	07+215	780278.629	1437941.787
583	07+225	780274.053	1437932.895
584	07+235	780269.477	1437924.003
585	07+245	780264.901	1437915.112
586	07+255	780260.325	1437906.220
587	07+265	780255.749	1437897.329
588	07+275	780251.173	1437888.437
589	07+285	780246.597	1437879.546
590	07+295	780242.021	1437870.654
591	07+305	780237.445	1437861.763
592	07+315	780232.869	1437852.871
593	07+325	780228.293	1437843.979
594	07+335	780223.717	1437835.088
595	07+345	780219.141	1437826.196
596	07+355	780214.569	1437817.303
597	07+365	780210.017	1437808.399
598	07+375	780205.503	1437799.475
599	07+385	780201.048	1437790.523
600	07+395	780196.664	1437781.535
601	07+405	780192.356	1437772.511
602	07+415	780188.123	1437763.451
603	07+425	780183.965	1437754.356
604	07+435	780179.884	1437745.227
605	07+445	780175.879	1437736.064
606	07+455	780171.950	1437726.868
607	07+465	780168.098	1437717.640
608	07+475	780164.323	1437708.380
609	07+485	780160.625	1437699.088
610	07+495	780157.005	1437689.767
611	07+505	780153.463	1437680.415
612	07+515	780149.999	1437671.034
613	07+525	780146.613	1437661.625
614	07+535	780143.305	1437652.188
615	07+545	780140.077	1437642.723
616	07+555	780136.927	1437633.232
617	07+565	780133.857	1437623.716
618	07+575	780130.865	1437614.173
619	07+585	780127.954	1437604.607
620	07+595	780125.122	1437595.016
621	07+605	780122.371	1437585.402
622	07+615	780119.699	1437575.765
623	07+625	780117.108	1437566.107
624	07+635	780114.598	1437556.427
625	07+645	780112.168	1437546.727
626	07+655	780109.820	1437537.007
627	07+665	780107.552	1437527.267
628	07+675	780105.366	1437517.509
629	07+685	780103.261	1437507.733
630	07+695	780101.237	1437497.940
631	07+705	780099.295	1437488.131
632	07+715	780097.435	1437478.305

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
633	07+725	780095.657	1437468.464
634	07+735	780093.961	1437458.609
635	07+745	780092.347	1437448.740
636	07+755	780090.816	1437438.858
637	07+765	780089.367	1437428.964
638	07+775	780088.000	1437419.058
639	07+785	780086.716	1437409.141
640	07+795	780085.515	1437399.213
641	07+805	780084.396	1437389.276
642	07+815	780083.361	1437379.330
643	07+825	780082.408	1437369.375
644	07+835	780081.538	1437359.413
645	07+845	780080.751	1437349.444
646	07+855	780080.034	1437339.470
647	07+865	780079.368	1437329.492
648	07+875	780078.732	1437319.512
649	07+885	780078.106	1437309.532
650	07+895	780077.480	1437299.552
651	07+905	780076.854	1437289.571
652	07+915	780076.228	1437279.591
653	07+925	780075.602	1437269.611
654	07+935	780074.976	1437259.630
655	07+945	780074.350	1437249.650
656	07+955	780073.724	1437239.669
657	07+965	780073.098	1437229.689
658	07+975	780072.471	1437219.709
659	07+985	780071.845	1437209.728
660	07+995	780071.219	1437199.748
661	08+005	780070.593	1437189.767
662	08+015	780069.967	1437179.787
663	08+025	780069.341	1437169.807
664	08+035	780068.715	1437159.826
665	08+045	780068.089	1437149.846
666	08+055	780067.463	1437139.866
667	08+065	780066.837	1437129.885
668	08+075	780066.211	1437119.905
669	08+085	780065.585	1437109.924
670	08+095	780064.959	1437099.944
671	08+105	780064.332	1437089.964
672	08+115	780063.706	1437079.983
673	08+125	780063.080	1437070.003
674	08+135	780062.454	1437060.023
675	08+145	780061.828	1437050.042
676	08+155	780061.202	1437040.062
677	08+165	780060.576	1437030.081
678	08+175	780059.950	1437020.101
679	08+185	780059.324	1437010.121
680	08+195	780058.698	1437000.140
681	08+205	780058.072	1436990.160
682	08+215	780057.446	1436980.179
683	08+225	780056.820	1436970.199
684	08+235	780056.193	1436960.219
685	08+245	780055.567	1436950.238

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Chainage (m)	Easting-X	Northing-Y
686	08+255	780054.941	1436940.258
687	08+265	780054.315	1436930.278
688	08+275	780053.689	1436920.297
689	08+285	780053.063	1436910.317
690	08+295	780052.437	1436900.336
691	08+305	780051.811	1436890.356
692	08+315	780051.185	1436880.376
693	08+325	780050.559	1436870.395
694	08+335	780049.933	1436860.415
695	08+345	780049.307	1436850.434
696	08+355	780048.681	1436840.454
697	08+365	780048.055	1436830.474
698	08+375	780047.428	1436820.493
699	08+385	780046.802	1436810.513
700	08+395	780046.176	1436800.533
701	08+405	780045.550	1436790.552
702	08+415	780044.924	1436780.572
703	08+425	780044.298	1436770.591
704	08+435	780043.672	1436760.611
705	08+445	780043.046	1436750.631
706	08+455	780042.420	1436740.650
707	08+465	780041.794	1436730.670
708	08+475	780041.168	1436720.690
709	08+485	780040.542	1436710.709
710	08+495	780039.916	1436700.729
711	08+505	780039.289	1436690.748
712	08+515	780038.663	1436680.768
713	08+525	780038.037	1436670.788
714	08+535	780037.411	1436660.807
715	08+545	780036.785	1436650.827
716	08+555	780036.159	1436640.846
717	08+565	780035.533	1436630.866
718	08+575	780034.907	1436620.886
719	08+585	780034.281	1436610.905
720	08+595	780033.655	1436600.925
721	08+605	780033.029	1436590.945
722	08+615	780032.403	1436580.964
723	08+625	780031.777	1436570.984
724	08+635	780031.151	1436561.003
725	08+645	780030.524	1436551.023
726	08+655	780029.898	1436541.043
727	08+665	780029.272	1436531.062
728	08+675	780028.646	1436521.082
729	08+685	780028.020	1436511.101
730	08+695	780027.394	1436501.121
731	08+705	780026.768	1436491.141
732	08+715	780026.142	1436481.160
733	08+725	780025.516	1436471.180
734	08+735	780024.890	1436461.200
735	08+745	780024.264	1436451.219

Centerline Coordinates of Entry Ramp 1 (Hebbal Service Road)

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL. No.	Station	Easting	Northing
1	00+000	781177.242	1443940.500
2	00+010	781173.041	1443931.425
3	00+020	781168.841	1443922.349
4	00+030	781164.666	1443913.263
5	00+040	781160.631	1443904.113
6	00+050	781156.874	1443894.846
7	00+060	781153.539	1443885.420
8	00+070	781150.773	1443875.812
9	00+080	781148.731	1443866.026
10	00+090	781147.572	1443856.097
11	00+100	781147.449	1443846.103
12	00+110	781148.433	1443836.157
13	00+120	781150.513	1443826.381
14	00+130	781153.595	1443816.870
15	00+140	781157.022	1443807.476
16	00+150	781160.452	1443798.083
17	00+160	781163.882	1443788.689
18	00+170	781167.312	1443779.296
19	00+180	781170.742	1443769.903
20	00+190	781174.172	1443760.509
21	00+200	781177.602	1443751.116
22	00+210	781181.032	1443741.723
23	00+220	781184.463	1443732.329
24	00+230	781187.914	1443722.944
25	00+240	781191.509	1443713.613
26	00+250	781195.403	1443704.403
27	00+260	781199.721	1443695.384
28	00+270	781204.485	1443686.593
29	00+280	781209.682	1443678.051
30	00+290	781215.299	1443669.779
31	00+300	781221.288	1443661.772
32	00+310	781227.521	1443653.952
33	00+320	781233.863	1443646.220
34	00+330	781240.217	1443638.498
35	00+340	781246.572	1443630.777
36	00+341	781247.382	1443629.793

Centerline Coordinates of Entry Ramp 2 (From ORR To Main Tunnel Towards Silk Board/Sarjapur Road)

SL. No.	Station	Easting	Northing
1	00+000	782304.687	1443393.214
2	00+010	782294.956	1443390.913
3	00+020	782285.222	1443388.622
4	00+030	782275.465	1443386.429
5	00+040	782265.661	1443384.463
6	00+050	782255.798	1443382.817
7	00+060	782245.885	1443381.499

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL. No.	Station	Easting	Northing
8	00+070	782235.934	1443380.513
9	00+080	782225.958	1443379.825
10	00+090	782215.971	1443379.315
11	00+100	782205.982	1443378.856
12	00+110	782195.992	1443378.398
13	00+120	782186.003	1443377.940
14	00+130	782176.013	1443377.483
15	00+140	782166.024	1443377.025
16	00+150	782156.034	1443376.567
17	00+160	782146.045	1443376.109
18	00+170	782136.055	1443375.651
19	00+180	782126.066	1443375.193
20	00+190	782116.076	1443374.736
21	00+200	782106.087	1443374.278
22	00+210	782096.097	1443373.820
23	00+220	782086.107	1443373.379
24	00+230	782076.112	1443373.069
25	00+240	782066.113	1443373.037
26	00+250	782056.121	1443373.432
27	00+260	782046.170	1443374.401
28	00+270	782036.316	1443376.086
29	00+280	782026.647	1443378.622
30	00+290	782017.286	1443382.128
31	00+300	782008.370	1443386.644
32	00+310	782000.010	1443392.121
33	00+320	781992.308	1443398.491
34	00+330	781985.336	1443405.654
35	00+340	781979.074	1443413.447
36	00+350	781973.455	1443421.716
37	00+360	781968.387	1443430.335
38	00+370	781963.759	1443439.199
39	00+380	781959.451	1443448.223
40	00+390	781955.331	1443457.335
41	00+400	781951.271	1443466.473
42	00+410	781947.212	1443475.612
43	00+420	781943.153	1443484.752
44	00+430	781939.094	1443493.891
45	00+440	781935.021	1443503.024
46	00+450	781930.831	1443512.103
47	00+460	781926.391	1443521.063
48	00+470	781921.576	1443529.826
49	00+480	781916.267	1443538.299
50	00+490	781910.362	1443546.366
51	00+500	781903.780	1443553.890
52	00+510	781896.470	1443560.706
53	00+520	781888.453	1443566.675
54	00+530	781879.824	1443571.717
55	00+540	781870.688	1443575.772

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL. No.	Station	Easting	Northing
56	00+550	781861.160	1443578.789
57	00+560	781851.355	1443580.731
58	00+570	781841.396	1443581.574
59	00+580	781831.405	1443581.307
60	00+590	781821.505	1443579.934
61	00+600	781811.818	1443577.472
62	00+610	781802.464	1443573.951
63	00+620	781793.558	1443569.414
64	00+630	781785.210	1443563.918
65	00+640	781777.523	1443557.530
66	00+650	781770.592	1443550.329
67	00+660	781764.501	1443542.404
68	00+670	781759.328	1443533.852
69	00+680	781755.134	1443524.780
70	00+690	781751.950	1443515.305
71	00+700	781749.695	1443505.566
72	00+710	781748.243	1443495.674
73	00+720	781747.456	1443485.707
74	00+730	781747.190	1443475.711
75	00+740	781747.298	1443465.712
76	00+750	781747.631	1443455.718
77	00+760	781748.045	1443445.726
78	00+770	781748.462	1443435.735
79	00+780	781748.878	1443425.744
80	00+790	781749.295	1443415.752
81	00+800	781749.712	1443405.761
82	00+810	781750.129	1443395.770
83	00+814	781750.309	1443391.460

Edge line Coordinates of Entry Ramp 3 (From Jaya Mahal Road)

SL. No.	Station	Easting	Northing
1	00+000	780917.547	1439796.552
2	00+010	780911.901	1439804.807
3	00+020	780906.256	1439813.061
4	00+030	780900.611	1439821.315
5	00+040	780894.966	1439829.569
6	00+050	780889.321	1439837.823
7	00+060	780883.675	1439846.078
8	00+070	780878.030	1439854.332
9	00+080	780872.385	1439862.586
10	00+090	780866.740	1439870.840
11	00+100	780861.095	1439879.094
12	00+110	780855.449	1439887.349
13	00+120	780849.804	1439895.603
14	00+130	780844.159	1439903.857
15	00+140	780838.513	1439912.111
16	00+150	780832.805	1439920.321

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL. No.	Station	Easting	Northing
17	00+160	780826.995	1439928.460
18	00+170	780821.083	1439936.526
19	00+180	780815.071	1439944.517
20	00+190	780808.960	1439952.432
21	00+200	780802.750	1439960.270
22	00+210	780796.443	1439968.030
23	00+220	780790.055	1439975.724
24	00+230	780783.660	1439983.411
25	00+240	780777.264	1439991.099
26	00+250	780770.868	1439998.786
27	00+260	780764.473	1440006.473
28	00+270	780758.077	1440014.161
29	00+280	780751.681	1440021.848
30	00+290	780745.286	1440029.535
31	00+300	780738.879	1440037.214
32	00+310	780732.381	1440044.815
33	00+320	780725.686	1440052.242
34	00+330	780718.696	1440059.392
35	00+340	780711.325	1440066.148
36	00+350	780703.506	1440072.378
37	00+360	780695.196	1440077.934
38	00+370	780686.391	1440082.666
39	00+380	780677.158	1440086.495
40	00+390	780667.588	1440089.383
41	00+400	780657.778	1440091.301
42	00+410	780647.826	1440092.230
43	00+420	780637.830	1440092.161
44	00+430	780627.891	1440091.095
45	00+440	780618.109	1440089.041
46	00+450	780608.580	1440086.021
47	00+460	780599.400	1440082.065
48	00+470	780590.661	1440077.213
49	00+480	780582.450	1440071.512
50	00+490	780574.850	1440065.020
51	00+500	780567.935	1440057.801
52	00+510	780561.776	1440049.928
53	00+520	780556.433	1440041.480
54	00+530	780551.961	1440032.541
55	00+540	780548.397	1440023.202
56	00+550	780545.693	1440013.577
57	00+560	780543.731	1440003.773
58	00+570	780542.382	1439993.866
59	00+580	780541.509	1439983.905
60	00+590	780540.971	1439973.920
61	00+600	780540.625	1439963.926
62	00+610	780540.336	1439953.930
63	00+620	780540.048	1439943.934
64	00+630	780539.760	1439933.938

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL. No.	Station	Easting	Northing
65	00+640	780539.472	1439923.942
66	00+650	780539.184	1439913.947
67	00+660	780538.896	1439903.951
68	00+670	780538.608	1439893.955
69	00+680	780538.320	1439883.959
70	00+690	780538.032	1439873.963
71	00+700	780537.743	1439863.967
72	00+710	780537.404	1439853.973
73	00+720	780536.895	1439843.986
74	00+730	780536.143	1439834.015
75	00+740	780535.141	1439824.066
76	00+750	780533.891	1439814.144
77	00+760	780532.394	1439804.257
78	00+770	780530.650	1439794.411
79	00+780	780528.660	1439784.611
80	00+790	780526.426	1439774.864
81	00+800	780523.972	1439765.170
82	00+810	780521.403	1439755.505
83	00+820	780518.817	1439745.846
84	00+830	780516.231	1439736.186
85	00+840	780513.645	1439726.526
86	00+850	780511.058	1439716.866
87	00+860	780508.472	1439707.207
88	00+870	780505.886	1439697.547
89	00+871	780505.686	1439696.801

Edge line Coordinates of Entry Ramp 4 (From CV Raman Road to Main Tunnel Towards Hebbal)

SL No.	Station	Easting	Northing
1	00+000	778660.877	1440136.247
2	00+010	778670.844	1440137.061
3	00+020	778680.811	1440137.874
4	00+030	778690.778	1440138.688
5	00+040	778700.744	1440139.502
6	00+050	778710.711	1440140.315
7	00+060	778720.678	1440141.129
8	00+070	778730.645	1440141.943
9	00+080	778740.612	1440142.756
10	00+090	778750.579	1440143.570
11	00+100	778760.545	1440144.384
12	00+110	778770.512	1440145.197
13	00+120	778780.479	1440146.011
14	00+130	778790.446	1440146.824
15	00+140	778800.413	1440147.638
16	00+150	778810.380	1440148.452
17	00+160	778820.346	1440149.265
18	00+170	778830.313	1440150.079
19	00+180	778840.280	1440150.893
20	00+190	778850.247	1440151.706

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
21	00+200	778860.214	1440152.520
22	00+210	778870.181	1440153.334
23	00+220	778880.148	1440154.147
24	00+230	778890.114	1440154.961
25	00+240	778900.081	1440155.774
26	00+250	778910.050	1440156.562
27	00+260	778920.022	1440157.308
28	00+270	778929.995	1440158.051
29	00+280	778939.967	1440158.793
30	00+290	778949.940	1440159.535
31	00+300	778959.912	1440160.278
32	00+310	778969.884	1440161.020
33	00+320	778979.857	1440161.763
34	00+330	778989.829	1440162.506
35	00+340	778999.799	1440163.279
36	00+350	779009.765	1440164.103
37	00+360	779019.727	1440164.977
38	00+370	779029.685	1440165.890
39	00+380	779039.643	1440166.808
40	00+390	779049.601	1440167.726
41	00+400	779059.558	1440168.643
42	00+410	779069.516	1440169.561
43	00+420	779079.474	1440170.478
44	00+430	779089.432	1440171.396
45	00+440	779099.390	1440172.313
46	00+450	779109.348	1440173.231
47	00+460	779119.305	1440174.148
48	00+470	779129.263	1440175.066
49	00+480	779139.221	1440175.984
50	00+490	779149.179	1440176.901
51	00+500	779159.137	1440177.819
52	00+510	779169.094	1440178.736
53	00+520	779179.052	1440179.654
54	00+530	779189.010	1440180.571
55	00+540	779198.968	1440181.489
56	00+550	779208.926	1440182.406
57	00+560	779218.884	1440183.324
58	00+570	779228.841	1440184.242
59	00+580	779238.799	1440185.159
60	00+590	779248.757	1440186.073
61	00+600	779258.722	1440186.912
62	00+610	779268.695	1440187.652
63	00+620	779278.674	1440188.292
64	00+630	779288.659	1440188.833
65	00+640	779298.650	1440189.273
66	00+650	779308.644	1440189.617
67	00+660	779318.639	1440189.934
68	00+670	779328.634	1440190.251

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
69	00+680	779338.629	1440190.568
70	00+690	779348.624	1440190.885
71	00+700	779358.618	1440191.202
72	00+710	779368.613	1440191.519
73	00+720	779378.608	1440191.836
74	00+730	779388.603	1440192.153
75	00+740	779398.599	1440192.436
76	00+750	779408.597	1440192.669
77	00+760	779418.595	1440192.852
78	00+770	779428.594	1440192.985
79	00+780	779438.594	1440193.068
80	00+790	779448.594	1440193.101
81	00+800	779458.594	1440193.085
82	00+810	779468.593	1440193.023
83	00+820	779478.593	1440192.953
84	00+830	779488.593	1440192.883
85	00+840	779498.593	1440192.813
86	00+850	779508.592	1440192.743
87	00+860	779518.592	1440192.673
88	00+870	779528.592	1440192.604
89	00+880	779538.592	1440192.534
90	00+890	779548.592	1440192.464
91	00+900	779558.591	1440192.394
92	00+910	779568.591	1440192.324
93	00+920	779578.591	1440192.254
94	00+930	779588.591	1440192.185
95	00+940	779598.590	1440192.115
96	00+950	779608.590	1440192.045
97	00+960	779618.590	1440191.975
98	00+970	779628.590	1440191.905
99	00+980	779638.589	1440191.835
100	00+990	779648.589	1440191.765
101	01+000	779658.589	1440191.696
102	01+010	779668.589	1440191.626
103	01+020	779678.588	1440191.556
104	01+030	779688.588	1440191.486
105	01+040	779698.588	1440191.416
106	01+050	779708.588	1440191.346
107	01+060	779718.587	1440191.277
108	01+070	779728.587	1440191.207
109	01+080	779738.587	1440191.137
110	01+090	779748.587	1440191.067
111	01+100	779758.586	1440190.997
112	01+110	779768.586	1440190.927
113	01+120	779778.586	1440190.857
114	01+130	779788.585	1440190.764
115	01+140	779798.584	1440190.620
116	01+150	779808.583	1440190.427

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
117	01+160	779818.580	1440190.183
118	01+170	779828.575	1440189.889
119	01+180	779838.569	1440189.546
120	01+190	779848.562	1440189.159
121	01+200	779858.554	1440188.767
122	01+210	779868.546	1440188.375
123	01+220	779878.539	1440187.983
124	01+230	779888.531	1440187.591
125	01+240	779898.523	1440187.199
126	01+250	779908.516	1440186.807
127	01+260	779918.508	1440186.415
128	01+270	779928.500	1440186.023
129	01+280	779938.493	1440185.631
130	01+290	779948.485	1440185.239
131	01+300	779958.477	1440184.847
132	01+310	779968.470	1440184.455
133	01+320	779978.462	1440184.063
134	01+330	779988.454	1440183.671
135	01+340	779998.447	1440183.279
136	01+350	780008.439	1440182.887
137	01+360	780018.431	1440182.495
138	01+370	780028.423	1440182.103
139	01+380	780038.416	1440181.711
140	01+390	780048.408	1440181.319
141	01+400	780058.400	1440180.927
142	01+410	780068.393	1440180.535
143	01+420	780078.385	1440180.142
144	01+430	780088.377	1440179.750
145	01+440	780098.370	1440179.358
146	01+450	780108.362	1440178.966
147	01+460	780118.354	1440178.574
148	01+470	780128.347	1440178.182
149	01+480	780138.339	1440177.790
150	01+490	780148.331	1440177.398
151	01+500	780158.324	1440177.006
152	01+510	780168.316	1440176.614
153	01+520	780178.308	1440176.222
154	01+530	780188.301	1440175.835
155	01+540	780198.296	1440175.520
156	01+550	780208.295	1440175.391
157	01+560	780218.293	1440175.562
158	01+570	780228.276	1440176.120
159	01+580	780238.230	1440177.077
160	01+590	780248.137	1440178.431
161	01+600	780257.982	1440180.180
162	01+610	780267.749	1440182.322
163	01+620	780277.423	1440184.852
164	01+630	780286.988	1440187.767

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
165	01+640	780296.429	1440191.063
166	01+650	780305.730	1440194.733
167	01+660	780314.878	1440198.772
168	01+670	780323.856	1440203.174
169	01+680	780332.651	1440207.931
170	01+690	780341.249	1440213.037
171	01+700	780349.636	1440218.482
172	01+710	780357.798	1440224.258
173	01+720	780365.723	1440230.355
174	01+730	780373.398	1440236.765
175	01+740	780380.810	1440243.477
176	01+750	780387.948	1440250.480
177	01+760	780394.800	1440257.762
178	01+770	780401.355	1440265.313
179	01+780	780407.603	1440273.120
180	01+790	780413.534	1440281.170
181	01+800	780419.139	1440289.451
182	01+810	780424.408	1440297.950
183	01+820	780429.332	1440306.652
184	01+830	780433.905	1440315.545
185	01+840	780438.118	1440324.613
186	01+850	780441.966	1440333.843
187	01+860	780445.441	1440343.219
188	01+870	780448.539	1440352.726
189	01+880	780451.282	1440362.342
190	01+890	780453.767	1440372.028
191	01+900	780456.104	1440381.751
192	01+910	780458.397	1440391.485
193	01+920	780460.689	1440401.219
194	01+930	780462.981	1440410.952
195	01+940	780465.273	1440420.686
196	01+945	780466.349	1440425.253

Edge line Coordinates of Exit Ramp 5 (From Main Tunnel to Jaya Mahal Road Towards Jaya Mahal Road)

SL No.	Station	Easting	Northing
1	0	780917.547	1439796.552
2	10	780911.901	1439804.807
3	20	780906.256	1439813.061
4	30	780900.611	1439821.315
5	40	780894.966	1439829.569
6	50	780889.321	1439837.823
7	60	780883.675	1439846.078
8	70	780878.030	1439854.332
9	80	780872.385	1439862.586
10	90	780866.740	1439870.840
11	100	780861.095	1439879.094
12	110	780855.449	1439887.349

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
13	120	780849.804	1439895.603
14	130	780844.159	1439903.857
15	140	780838.513	1439912.111
16	150	780832.805	1439920.321
17	160	780826.995	1439928.460
18	170	780821.083	1439936.526
19	180	780815.071	1439944.517
20	190	780808.960	1439952.432
21	200	780802.750	1439960.270
22	210	780796.443	1439968.030
23	220	780790.055	1439975.724
24	230	780783.660	1439983.411
25	240	780777.264	1439991.099
26	250	780770.868	1439998.786
27	260	780764.473	1440006.473
28	270	780758.077	1440014.161
29	280	780751.681	1440021.848
30	290	780745.286	1440029.535
31	300	780738.890	1440037.223
32	310	780732.494	1440044.910
33	320	780726.099	1440052.597
34	330	780719.703	1440060.285
35	340	780713.307	1440067.972
36	350	780706.911	1440075.659
37	360	780700.516	1440083.347
38	370	780694.120	1440091.034
39	380	780687.724	1440098.721
40	390	780681.329	1440106.409
41	400	780674.933	1440114.096
42	410	780668.537	1440121.783
43	420	780662.142	1440129.471
44	430	780655.746	1440137.158
45	440	780649.350	1440144.845
46	450	780642.954	1440152.533
47	460	780636.559	1440160.220
48	470	780630.163	1440167.907
49	480	780623.767	1440175.595
50	490	780617.372	1440183.282
51	500	780610.976	1440190.969
52	510	780604.583	1440198.659
53	520	780598.249	1440206.398
54	530	780592.083	1440214.269
55	540	780586.194	1440222.351
56	550	780580.646	1440230.669
57	560	780575.448	1440239.212
58	570	780570.612	1440247.964
59	580	780566.143	1440256.909
60	590	780562.052	1440266.033

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
61	600	780558.344	1440275.319
62	610	780555.026	1440284.752
63	620	780552.104	1440294.315
64	630	780549.582	1440303.991
65	640	780547.466	1440313.764
66	650	780545.759	1440323.616
67	660	780544.464	1440333.531
68	670	780543.583	1440343.491
69	680	780543.117	1440353.480
70	690	780543.068	1440363.479
71	700	780543.435	1440373.472
72	710	780544.219	1440383.440
73	720	780545.414	1440393.368
74	730	780546.946	1440403.249
75	740	780548.680	1440413.098
76	750	780550.483	1440422.934
77	760	780552.288	1440432.770
78	770	780554.092	1440442.606
79	780	780555.897	1440452.441
80	790	780557.702	1440462.277
81	800	780559.507	1440472.113
82	810	780561.312	1440481.949
83	820	780563.116	1440491.785
84	830	780564.921	1440501.620
85	840	780566.726	1440511.456
86	850	780568.531	1440521.292
87	860	780570.336	1440531.128
88	870	780572.140	1440540.963
89	880	780573.945	1440550.799
90	890	780575.750	1440560.635
91	900	780577.555	1440570.471
92	910	780579.360	1440580.307
93	920	780581.164	1440590.142
94	930	780582.969	1440599.978
95	940	780584.774	1440609.814
96	950	780586.579	1440619.650
97	960	780588.384	1440629.486
98	970	780590.188	1440639.321
99	980	780591.993	1440649.157
100	990	780593.798	1440658.993
101	1000	780595.603	1440668.829
102	1010	780597.407	1440678.664
103	1020	780599.212	1440688.500
104	1030	780601.017	1440698.336
105	1040	780602.822	1440708.172
106	1050	780604.627	1440718.008
107	1060	780606.431	1440727.843
108	1070	780608.236	1440737.679

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
109	1080	780610.041	1440747.515
110	1090	780611.846	1440757.351
111	1100	780613.651	1440767.187
112	1106.444	780614.814	1440773.525

Edge line Coordinates of Exit Ramp 6 (From Silk Board Towards C V Raman Rd)

SL No.	Station	Easting	Northing
1	00+000	778660.877	1440136.247
2	00+010	778670.844	1440137.061
3	00+020	778680.811	1440137.874
4	00+030	778690.778	1440138.688
5	00+040	778700.744	1440139.502
6	00+050	778710.711	1440140.315
7	00+060	778720.678	1440141.129
8	00+070	778730.645	1440141.943
9	00+080	778740.612	1440142.756
10	00+090	778750.579	1440143.570
11	00+100	778760.545	1440144.384
12	00+110	778770.512	1440145.197
13	00+120	778780.479	1440146.011
14	00+130	778790.446	1440146.824
15	00+140	778800.413	1440147.638
16	00+150	778810.380	1440148.452
17	00+160	778820.346	1440149.265
18	00+170	778830.313	1440150.079
19	00+180	778840.280	1440150.893
20	00+190	778850.247	1440151.706
21	00+200	778860.214	1440152.520
22	00+210	778870.181	1440153.334
23	00+220	778880.148	1440154.147
24	00+230	778890.114	1440154.961
25	00+240	778900.081	1440155.774
26	00+250	778910.050	1440156.562
27	00+260	778920.022	1440157.308
28	00+270	778929.995	1440158.051
29	00+280	778939.967	1440158.793
30	00+290	778949.940	1440159.535
31	00+300	778959.912	1440160.278
32	00+310	778969.884	1440161.020
33	00+320	778979.857	1440161.763
34	00+330	778989.829	1440162.505
35	00+340	778999.802	1440163.246
36	00+350	779009.777	1440163.949
37	00+360	779019.755	1440164.608
38	00+370	779029.734	1440165.261
39	00+380	779039.713	1440165.913

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
40	00+390	779049.691	1440166.565
41	00+400	779059.670	1440167.217
42	00+410	779069.649	1440167.870
43	00+420	779079.627	1440168.522
44	00+430	779089.606	1440169.174
45	00+440	779099.585	1440169.826
46	00+450	779109.563	1440170.478
47	00+460	779119.542	1440171.131
48	00+470	779129.521	1440171.783
49	00+480	779139.500	1440172.435
50	00+490	779149.478	1440173.087
51	00+500	779159.457	1440173.740
52	00+510	779169.436	1440174.392
53	00+520	779179.414	1440175.044
54	00+530	779189.393	1440175.696
55	00+540	779199.372	1440176.348
56	00+550	779209.351	1440177.001
57	00+560	779219.329	1440177.652
58	00+570	779229.309	1440178.290
59	00+580	779239.291	1440178.881
60	00+590	779249.278	1440179.406
61	00+600	779259.267	1440179.865
62	00+610	779269.259	1440180.258
63	00+620	779279.254	1440180.592
64	00+630	779289.249	1440180.899
65	00+640	779299.244	1440181.202
66	00+650	779309.240	1440181.506
67	00+660	779319.235	1440181.809
68	00+670	779329.231	1440182.113
69	00+680	779339.226	1440182.416
70	00+690	779349.221	1440182.720
71	00+700	779359.217	1440183.022
72	00+710	779369.213	1440183.314
73	00+720	779379.209	1440183.579
74	00+730	779389.206	1440183.812
75	00+740	779399.204	1440184.010
76	00+750	779409.203	1440184.176
77	00+760	779419.202	1440184.308
78	00+770	779429.202	1440184.406
79	00+780	779439.201	1440184.472
80	00+790	779449.201	1440184.504
81	00+800	779459.201	1440184.503
82	00+810	779469.201	1440184.468
83	00+820	779479.201	1440184.401
84	00+830	779489.201	1440184.314
85	00+840	779499.200	1440184.221

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
86	00+850	779509.200	1440184.129
87	00+860	779519.199	1440184.036
88	00+870	779529.199	1440183.943
89	00+880	779539.199	1440183.850
90	00+890	779549.198	1440183.758
91	00+900	779559.198	1440183.665
92	00+910	779569.197	1440183.572
93	00+920	779579.197	1440183.479
94	00+930	779589.196	1440183.387
95	00+940	779599.196	1440183.294
96	00+950	779609.196	1440183.201
97	00+960	779619.195	1440183.109
98	00+970	779629.195	1440183.016
99	00+980	779639.194	1440182.923
100	00+990	779649.194	1440182.830
101	01+000	779659.193	1440182.738
102	01+010	779669.193	1440182.645
103	01+020	779679.193	1440182.552
104	01+030	779689.192	1440182.459
105	01+040	779699.192	1440182.367
106	01+050	779709.191	1440182.274
107	01+060	779719.191	1440182.181
108	01+070	779729.190	1440182.088
109	01+080	779739.190	1440181.996
110	01+090	779749.189	1440181.903
111	01+100	779759.189	1440181.810
112	01+110	779769.189	1440181.718
113	01+120	779779.188	1440181.625
114	01+130	779789.188	1440181.532
115	01+140	779799.187	1440181.433
116	01+150	779809.186	1440181.289
117	01+160	779819.184	1440181.095
118	01+170	779829.181	1440180.852
119	01+180	779839.177	1440180.558
120	01+190	779849.171	1440180.214
121	01+200	779859.163	1440179.821
122	01+210	779869.154	1440179.379
123	01+220	779879.143	1440178.924
124	01+230	779889.133	1440178.469
125	01+240	779899.123	1440178.014
126	01+250	779909.112	1440177.559
127	01+260	779919.102	1440177.104
128	01+270	779929.091	1440176.648
129	01+280	779939.081	1440176.193
130	01+290	779949.071	1440175.738
131	01+300	779959.060	1440175.283

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
132	01+310	779969.050	1440174.828
133	01+320	779979.040	1440174.373
134	01+330	779989.029	1440173.918
135	01+340	779999.019	1440173.463
136	01+350	780009.009	1440173.007
137	01+360	780018.998	1440172.552
138	01+370	780028.988	1440172.097
139	01+380	780038.977	1440171.642
140	01+390	780048.967	1440171.187
141	01+400	780058.957	1440170.732
142	01+410	780068.946	1440170.277
143	01+420	780078.936	1440169.822
144	01+430	780088.926	1440169.367
145	01+440	780098.915	1440168.911
146	01+450	780108.905	1440168.456
147	01+460	780118.895	1440168.001
148	01+470	780128.884	1440167.546
149	01+480	780138.874	1440167.091
150	01+490	780148.863	1440166.636
151	01+500	780158.853	1440166.181
152	01+510	780168.843	1440165.726
153	01+520	780178.832	1440165.271
154	01+530	780188.822	1440164.815
155	01+540	780198.812	1440164.360
156	01+550	780208.801	1440163.905
157	01+560	780218.791	1440163.450
158	01+570	780228.781	1440162.995
159	01+580	780238.770	1440162.540
160	01+590	780248.760	1440162.085
161	01+600	780258.748	1440161.604
162	01+610	780268.730	1440161.001
163	01+620	780278.695	1440160.164
164	01+630	780288.624	1440158.984
165	01+640	780298.489	1440157.356
166	01+650	780308.261	1440155.238
167	01+660	780317.915	1440152.634
168	01+670	780327.427	1440149.551
169	01+680	780336.773	1440145.996
170	01+690	780345.929	1440141.979
171	01+700	780354.874	1440137.509
172	01+710	780363.583	1440132.597
173	01+720	780372.037	1440127.257
174	01+730	780380.212	1440121.501
175	01+740	780388.090	1440115.343
176	01+750	780395.651	1440108.799
177	01+760	780402.874	1440101.886

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
178	01+770	780409.744	1440094.620
179	01+780	780416.241	1440087.020
180	01+790	780422.351	1440079.104
181	01+800	780428.057	1440070.894
182	01+810	780433.346	1440062.408
183	01+820	780438.204	1440053.668
184	01+830	780442.619	1440044.697
185	01+840	780446.581	1440035.516
186	01+850	780450.078	1440026.149
187	01+860	780453.103	1440016.619
188	01+870	780455.648	1440006.949
189	01+880	780457.727	1439997.168
190	01+890	780459.429	1439987.315
191	01+900	780460.861	1439977.418
192	01+910	780462.133	1439967.499
193	01+920	780463.351	1439957.574
194	01+930	780464.567	1439947.648
195	01+940	780465.784	1439937.722
196	01+942	780466.077	1439935.328

Edge line Coordinates of Exit Ramp 7 (From Main Tunnel to ORR Towards ORR (Outer Ring Road))

SL No.	Station	Easting	Northing
1	00+000	781540.325	1443522.354
2	00+010	781530.354	1443523.104
3	00+020	781520.380	1443523.833
4	00+030	781510.395	1443524.376
5	00+040	781500.397	1443524.512
6	00+050	781490.412	1443524.019
7	00+060	781480.506	1443522.678
8	00+070	781470.803	1443520.282
9	00+080	781461.494	1443516.654
10	00+090	781452.842	1443511.661
11	00+100	781445.132	1443505.311
12	00+110	781438.582	1443497.770
13	00+120	781433.311	1443489.283
14	00+130	781429.265	1443480.145
15	00+140	781426.308	1443470.597
16	00+150	781424.263	1443460.812
17	00+160	781422.929	1443450.902
18	00+170	781422.091	1443440.938
19	00+180	781421.529	1443430.954
20	00+190	781421.038	1443420.966
21	00+200	781420.547	1443410.978
22	00+210	781420.056	1443400.990
23	00+220	781419.565	1443391.002

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
24	00+230	781419.114	1443381.013
25	00+240	781418.835	1443371.017
26	00+250	781418.878	1443361.018
27	00+260	781419.390	1443351.032
28	00+270	781420.518	1443341.098
29	00+280	781422.402	1443331.280
30	00+290	781425.174	1443321.676
31	00+300	781428.941	1443312.418
32	00+310	781433.711	1443303.635
33	00+320	781439.425	1443295.435
34	00+330	781446.014	1443287.918
35	00+340	781453.395	1443281.179
36	00+350	781461.468	1443275.286
37	00+360	781470.080	1443270.210
38	00+370	781479.085	1443265.868
39	00+380	781488.367	1443262.151
40	00+390	781497.835	1443258.936
41	00+400	781507.421	1443256.090
42	00+410	781517.073	1443253.474
43	00+420	781526.749	1443250.949
44	00+430	781536.426	1443248.428
45	00+440	781546.103	1443245.908
46	00+450	781555.780	1443243.388
47	00+460	781565.458	1443240.868
48	00+470	781575.135	1443238.347
49	00+473	781578.089	1443237.578

Edge line Coordinates of Exit Ramp 8 (Hebbal Service Road)

SL No.	Station	Easting	Northing
1	00+000	781084.124	1443797.098
2	00+010	781085.923	1443806.935
3	00+020	781087.721	1443816.772
4	00+030	781089.520	1443826.609
5	00+040	781091.319	1443836.446
6	00+050	781093.118	1443846.283
7	00+060	781094.922	1443856.119
8	00+070	781096.814	1443865.938
9	00+080	781098.921	1443875.713
10	00+090	781101.339	1443885.416
11	00+100	781104.080	1443895.033
12	00+110	781107.139	1443904.553
13	00+120	781110.514	1443913.965
14	00+130	781114.201	1443923.260
15	00+140	781118.173	1443932.438
16	00+150	781122.322	1443941.536
17	00+160	781126.527	1443950.609

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel

SL No.	Station	Easting	Northing
18	00+170	781130.670	1443959.710
19	00+180	781134.631	1443968.892
20	00+190	781138.349	1443978.175
21	00+200	781141.818	1443987.554
22	00+210	781145.035	1443997.022
23	00+220	781148.013	1444006.568
24	00+230	781150.847	1444016.158
25	00+240	781153.651	1444025.757
26	00+250	781156.455	1444035.355
27	00+260	781159.259	1444044.954
28	00+270	781162.062	1444054.553
29	00+280	781164.866	1444064.152
30	00+290	781167.687	1444073.746
31	00+300	781170.615	1444083.308
32	00+310	781173.662	1444092.832
33	00+320	781176.773	1444102.336
34	00+330	781179.884	1444111.840
35	00+340	781182.993	1444121.344
36	00+350	781186.016	1444130.876
37	00+360	781188.915	1444140.447
38	00+370	781191.691	1444150.053
39	00+380	781194.343	1444159.695
40	00+390	781196.870	1444169.371
41	00+400	781199.272	1444179.078
42	00+410	781201.549	1444188.815
43	00+420	781203.722	1444198.576
44	00+430	781205.885	1444208.339
45	00+440	781208.048	1444218.103
46	00+450	781210.211	1444227.866
47	00+460	781212.374	1444237.629
48	00+470	781214.537	1444247.393
49	00+480	781216.699	1444257.156
50	00+490	781218.862	1444266.919
51	00+500	781221.025	1444276.683
52	00+510	781223.188	1444286.446
53	00+520	781225.351	1444296.209
54	00+530	781227.514	1444305.972
55	00+540	781229.677	1444315.736
56	00+548	781231.370	1444323.379

Appendix A-II
Coordinate System - Universal Transverse Mercator (UTM)-WGS84 (Zone 43N)
Package-1 (Design Chainage Km 0+000 to Km 8+748)
Edge line Coordinates of Tube-I (LHS) – Approach to TBM Tunnel